AEROBIC TREATMENT SYSTEMS

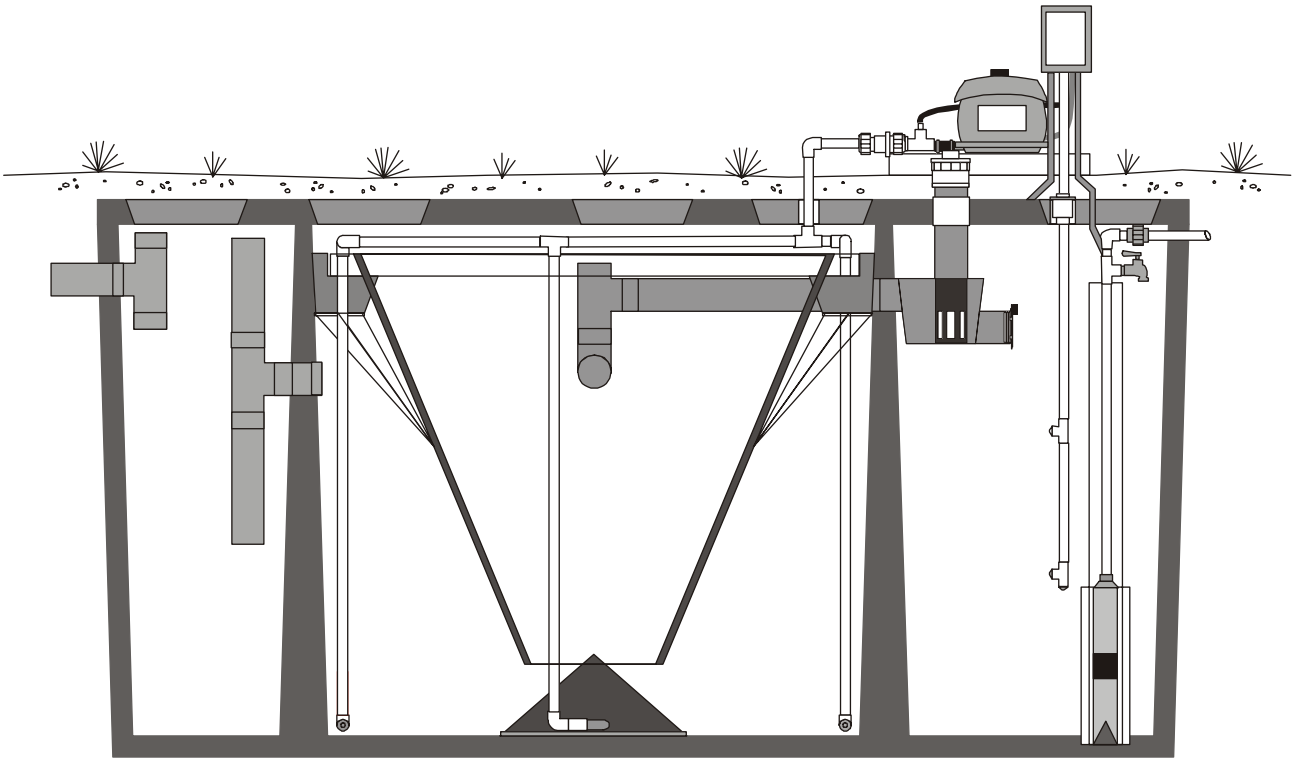
HOOT Aerobic Systems, Inc.®

2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

Homeowners Manual

This manual covers the H-500A, H-600A, H-750A and H-1000A Models

This Product has been tested in accordance with the criteria set forth in the ANSI/NSF Standard 40 and is hereby certified as a Class I Aerobic Wastewater Treatment Plant.



The HOOT Aerobic Treatment System
Declaration of Warnings

WARNING! TO PREVENT MALFUNCTION OF YOUR SEWAGE SYSTEM, DO NOT DISCHARGE THE FOLLOWING MATERIALS INTO THE SYSTEM: Plastic Materials ! Cloth ! Cigarette Stubs ! Paper towels ! Large quantities of acids or caustics, soaps or cleaning materials which have a high or low pH factor (Use low suds detergents) ! Throw-away Diapers ! Rubber products ! Kleenex, some toilet tissues which do not decompose readily in water ! Rainwater from Gutters ! Excess grease or fatty materials (Use garbage disposal sparingly) ! Oily materials, motor oils, grease, kerosene, gasoline, Paints, etc. ! Backwash water from any type of Water Softner ! Other materials which do not disintegrate in water ! A/C Discharge ! Sump pump discharge ! Automatic Toilet Disinfection Products

WARNING! TO FUNCTION PROPERLY, THE HOOT SYSTEM MUST BE MAINTAINED BY A QUALIFIED PROFESSIONAL AT LEAST EVERY SIX (6) MONTHS FOR THE LIFE OF THE SYSTEM. FAILURE TO MAINTAIN THE HOOT SYSTEM VOIDS THE LIMITED WARRANTY AND MAY CAUSE SERIOUS BODILY INJURY OR ILLNESS TO PEOPLE AND PETS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM OR OTHER PROPERTY.

DANGER! ONLY A QUALIFIED PROFESSIONAL SHOULD ATTEMPT TO REPAIR OR FIX THE HOOT SYSTEM. ATTEMPTED REPAIR BY ANYONE OTHER THAN A QUALIFIED PROFESSIONAL MAY CAUSE SERIOUS BODILY INJURY OR DEATH TO THE HOMEOWNER OR OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT DISCONNECT THE POWER TO THE HOOT SYSTEM. DISCONNECTION OF THE POWER FROM THE SYSTEM MAY CAUSE SERIOUS ILLNESS OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IN CASE OF IMMINENT FLOOD, IMMEDIATELY TURN OFF THE ELECTRICAL POWER TO THE HOOT SYSTEM AT THE INDEPENDENT BREAKER LOCATED ON THE HOUSE. FAILURE TO TURN OFF THE ELECTRICAL POWER MAY CAUSE SERIOUS INJURY OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IF THE UNIT FAILS TO FUNCTION PROPERLY, DO NOT USE THE BATHROOM FACILITIES UNTIL QUALIFIED PERSONNEL FIX THE PROBLEM. USE OF THE BATHROOM FACILITIES DURING A SYSTEM FAILURE MAY CAUSE SERIOUS INJURY, ILLNESS, OR DEATH TO PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! DO NOT ALLOW CHILDREN TO PLAY ON OR AROUND THE AEROBIC TREATMENT SYSTEM, THE SPRINKLER SYSTEM, OR OTHER OVER-LAND DISCHARGE AREA. ALLOWING CHILDREN TO PLAY IN THESE AREAS MAY CAUSE SERIOUS BODILY INJURY, ILLNESS, OR DEATH TO THE CHILDREN AND OTHER PERSONS AND MAY CAUSE DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT OPEN CONTROL PANEL WITHOUT ELECTRICITY DISCONTENTED AND LOCKED OUT ON THE SYSTEM. FAILURE TO DO SO COULD CAUSE SEVERE INJURY OR DEATH

Table Of Contents

Overview of Sewage Treatment

The treatment system is comprised of four components, namely a pretreatment tank, aeration chamber, final clairfier and a disinfection device. The pre-treatment tank aids in the anaerobic decomposition of the influent and provides a storage area for non-biodegradables which are inadvertently added to the system. The aeration chamber is the heart of the activated sewage treatment plant. By means of a blower, oxygen is incorporated into the sewage. This introduction of oxygen is done in such a manner as to intimately mix the organics of the sewage with the bacterial populations in the aeration chamber. Reduction of the organics is accomplished by these organisms. Movement of sewage in the aeration chamber causes the activated sludge that settled in the final clarifier to be re-introduced into the aeration chamber. As the solids settle out in the clairifier, a clear odorless effluent is produced which passes through the disinfection device, and into the pump tank for discharge at a later time. All HOOT systems have a minimum of a ½ days flow above the alarm to give ample time for service personnel to arrive and correct any problem which may occur.

The ANSI/NSF Standard 40 requires a minimum removal efficiency for the performance of Aerobic Wastewater Treatment Systems. For a system to be certified as a Class I Treatment unit the arithmetic mean of all effluent samples collected in a seven day period must be less than 45 mg/L. The HOOT Aerobic System had an average $CBOD_5$ of 2.4 and a Suspended Solids average of 1.8 with both averaging 99% removal efficiency. Properly installed and maintained, the Hoot System should be capable of producing this quality of effluent.

The effluent quality was found to meet or exceed state and federal standards for all other required parameters. According to these results, the HOOT unit is the most efficient wastewater treatment systems on the market today.

Electrical System Warning

The HOOT Aerobic System features a custom designed control panel made of proprietary parts. Just like the rest of the treatment system, it may only be serviced by a certified HOOT Installer/Service Provider. Although an electrician may be employed by an installer to make the final hook-up, an electrician is not qualified to do service on our control panel unless under the direct supervision of a HOOT Certified Service provider. Electrical diagrams are made avaliable only to our authorized service personnel for their use in servicing our system.

The HOOT Aerobic Treatment System Diagram

1. Inlet - where the wastewater enters the system from the home

2. Pretreatment Tank - where anaerobic digestion occurs and storage for non-biodegradeable materials

3. Aeration Chamber - where air is introduced into the sewage for digestion

4. Clarifier - a still chamber where solids settle out and the clear effluent rises

5. Chlorinator kills any remaining biological activity in the water entering the pump tank.

6. Pump Tank - where the treated and disinfected effluent is stored prior to discharge

7. Effluent Pump - how the treated water is discharged from the system

8. Discharge Line - to the disposal method prescribed by law or chosen by installer

9. Sampling Port - used by service personnel to inspect effluent quality

10. Probe - turns on and off the pump based on water level

11. Pump Wire - from pump to the control panel

12. HOOT System Controller - operates and regulates the control of the system

13. Power Line (30 Amp) - independent breaker provided by homeowner, builder or qualified electrician, necessary for proper operation of the system

14. Troy Air Linear Air Blower - long life, efficient linear blower which compresses atmospheric air and under pressure delivers it to the tank.

15. Air Manifold - delivers the air from the line to the stones for diffusion into the sewage

16. Aeration line - delivers the air from the pump to the manifold

17. High Water Probe - turns the pump on - also alarm probe if pump fails to come on

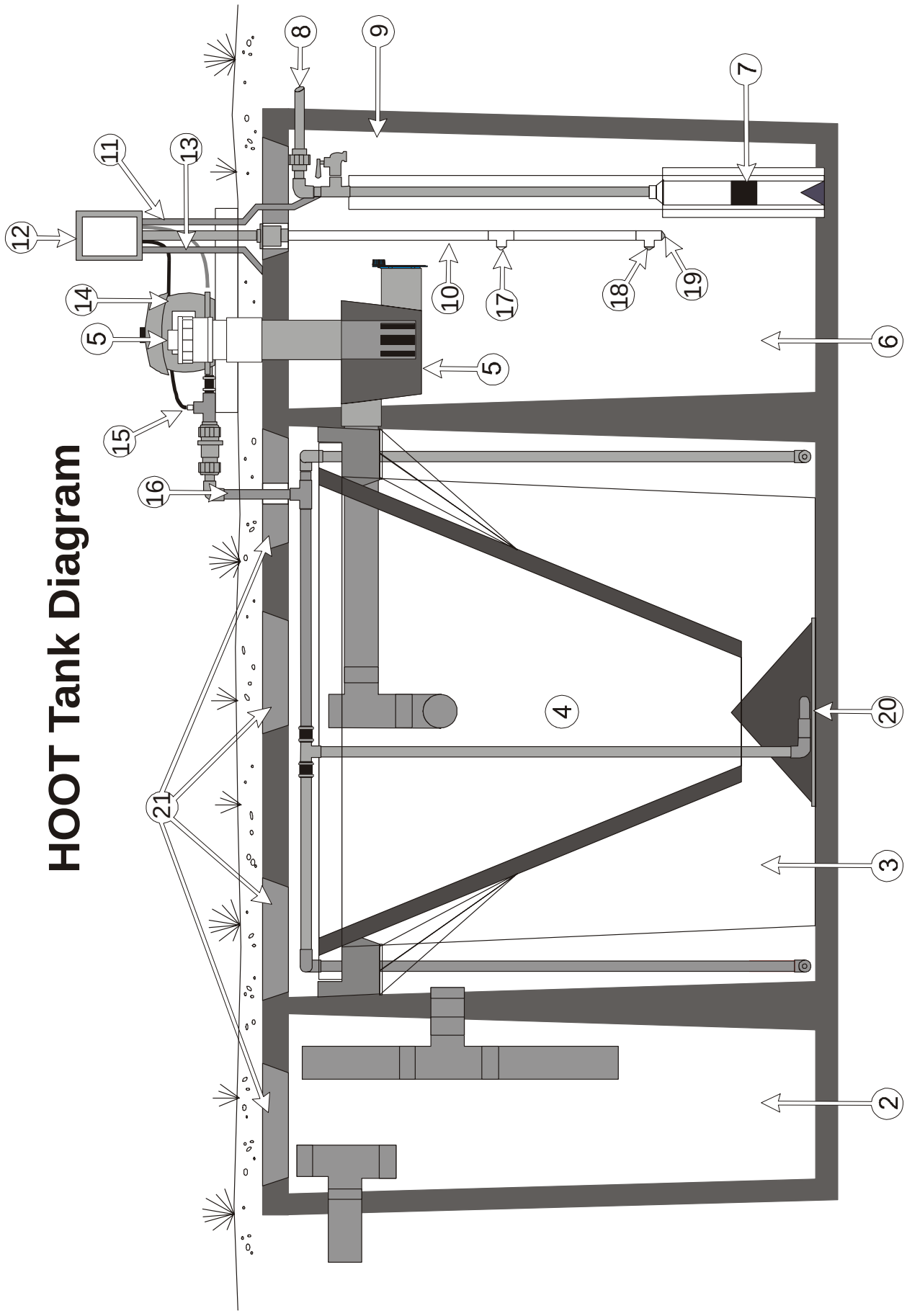
18. Low Water Probe - the off switch for the pump

19. Probe Ground - generates the low level signal in the water which is sensed by the probes

20. Aeration Stone - air is finely diffused from the stone into the aeration chamber

21. 15" Covers - provide access to each component of the system for service. Are usually brought to grade level to meet local regulations and for serviceability.

HOOT Tank Diagram



Chlorine Maintenance

ADD CHLORINE light will come on when the tablet level is between 1 and 2 tablets remaining. According to state law, It is the homeowners responsibility to maintain a chlorine residual in the pump tank of at least 0.1 mg/L. This can be achieved by keeping tablets, designed for the disinfection of wastewater in your chlorinator. To add tablets, remove the tube and follower, and clean out old tablets and residue. HOOT recommends filling the tube with approximately 1 months supply or 3 to 5 tablets, depending on use. A general rule is 1 tablet, per person, per month. Regulations may require more to be added at a time. Monitor the chlorine use, as well as the light, to determine when to add tablets to the tube. Carefully lower the dispenser tube into the chlorinator and reinstall the follower. Do not drop a tube filled with tablets. Damage to the dispenser, tube or tablets will occur and will not be covered by the warranty.

Chlorine Misuse Warning

Improper chlorine use can cause sever damage to the probe, pump and other components integral to the Hoot System. It can also create hazardous health conditions for those with exposure to the application area. The proper chlorine tablets are available from every Hoot Installer. They are specially formulated for small waste water flows and are an anti-wicking Calcium Hypochlorite formula. They are EPA registered and minimize excess residuals in the environment which may prove harmful to human or other life.

Environmental Protection Agency personnel are targeting the misapplication of chlorine products for more stringent enforcement. According to the E.P.A. the use of swimming pool chlorine in the treatment of waste water effluent is a violation of the Federal Insecticide, Fungicide, and Rodenticide Act Sections 136n-2g and 136j(a)g. The F.H.F.R.A . regulations essentially state anyone who is using a chlorine product for applications other than those stated on the product's labeling is potentially subject to fines or imprisonment. Individual users can be fined $500.00 for the first offenses and $2000.00 for subsequent violations.

Service Policy

The initial service policy, which covers the first two years of system operation, is included in the purchase price of every HOOT Aerobic Treatment System. During the first two years of system ownership, the homeowner is entitled to all service, sampling and inspection calls required by local regulatory officials. This will include a complete inspection of each component of the system, and any adjustments or servicing necessary to any electrical, mechanical and other component parts to ensure proper function. During the inspection, an effluent quality observation will be made as well. If there are any items which need corrected and can not be immediately remedied, you, the installer/inspector, will inform the home owner, in writing, of the conditions and the estimated repair date. Following the initial two year service policy, the installer, must make available, for purchase, a continued service policy comparable to the initial service policy. Our manufacturers will stock any and all replacement parts necessary to ensure that the HOOT Aerobic Treatment System will operate properly as long as you own your home. To service a HOOT System, a service representative must be certified on an annual basis by HOOT Aerobic Systems, Inc., or their qualified representatives.

TREATMENT SYSTEM INITIAL SERVICE POLICY

®

Our Company,_____, will operate and maintain the Hoot Aerobic System located at_____, (legal description only)
Permit #_____, for the period of 2 years beginning_____and ending_____.

This contract will provide for all required inspections, testing and service of your HOOT Aerobic Treatment System. The policy will include the following:

1. _____ inspections a year/service calls (at least one every _____ months), for a total of _____ over the two-year period including inspection, adjustment and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting the control panel, air pumps, air filters, diffuser operation, and replacing or repairing any component not found to be functioning correctly.

2. An effluent quality inspection consisting of a visual check for color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.

3. If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified immediately in writing of the conditions and estimated date of correction.

4. The Homeowner is responsible for maintaining a chlorine residual of at least 0.1mg/L in the treatment system. This can be accomplished by using chlorine tablets designed for wastewater use, NOT SWIMMING POOL TABLETS. Upon visit, if the system needs chlorine tablets the service provider will add them and charge the customer. If the customer fails in their responsibility to add the chlorine tablets, they are in violation of law and appropriate action will be taken.
   Initials of Installer_____ Initials of Homeowner_____

5. Any additional visits, inspections or sample collections required by specific Municipalities, Water/River Authorities, County Agencies the TCEQ or any other regulatory agency in your jurisdiction will be covered by this policy.

At the conclusion of the initial service policy, the Service Provider will make available, for purchase on an annual basis, a continuing service policy to cover labor for normal inspection, maintenance and repair. According to state law, all owners of aerobic systems must maintain a factory authorized service provider for the lifetime of the system.

With 48 hours of a request for service (weekends and holidays excluded), your system will be visited by the service provider listed below or their authorized agent. If there are any items which need correction and can not be immediately remedied, the service provider will inform the home owner, in writing, of the conditions and the estimated repair date.

The HOOT Homeowners Manual must be strictly followed or warranties are subject to invalidation. Pumping of sludge build-up, for reasons other than due to warrantied mechanical failure, are not covered by this policy and will result in additional charges. By signing this form, both Installer and Homeowner agree to the terms of this policy. By signing this form, both the Installer and the Homeowner agree that the Homeowner has received a copy of the Homeowners Manual and the Installer has made a reasonable effort to explain all pertinent information to the Homeowner.

HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	**SERVICE PROVIDER**
_____	_____
Name	Name of Service Company Representative
_____	_____
Address	Address
_____	_____
City	City
(_____) _____ - _____	(_____) _____ - _____
Phone	Phone
_____	_____
Signature of Home Owner	Signature of Service Provider and License #.

Homeowner Trouble Shooting

If both **AERATION PROBLEM** and **WATER LEVEL PROBLEM** occur, the photocell cannot tell the difference between daylight and darkness. This occurs when the computer "sees" that either day or night is greater than 32 hours. To correct this problem, redirect or turn off any overhead light that comes on a dusk, on at dawn.

If you have re-directed or turned off an overhead light, you will need to reset the controller to clear the alarm. To do this, you simply need to turn off the power to the system at your panel box for 10 seconds and then turn it back on. If the problem re-occurs approximately 30 hours later, you have a problem with your photocell and you will need to call your qualified Hoot Service Provider for assistance.

If you do not have an overhead light, then there is a problem with the photocell and you need to call your qualified Hoot Service Provider.

If **AERATION PROBLEM** occurs there has been a problem with your air delivery system. This is the most critical part of the treatment system and the problem must be corrected as quickly as possible. There are two problems that a homeowner can correct:

1. The air line from the blower to the control panel has come loose or been disconnected.

   Check first to see if the black line from the aerator is not pinched, and is properly installed into each end of the compression fittings. If this has been pulled loose, then turn off the power to the system at your panel box for 10 seconds and then turn it back on. If an aeration problem occurs again, then call for assistance.

If a **WATER LEVEL PROBLEM** and an audible alarm occurs, first determine if it is a problem also with an **AERATION PROBLEM** (See Above).

There are no homeowner repairs that can be made to the effluent delivery system. Please look directly at the panel and note wether the light is steady, slow or fast flashing. This will aid the installer in coming to the quickest resolution of your problem.

If **POWER FAILURE ALARM** occurs

1). Circuit Breaker to system - from house - is tripped.
2). Circuit Breaker at house panel box for remote breaker is tripped.

If **ADD CHLORINE** comes on

When the tablet level is between 1-2 tablets remaining, the **ADD CHLORINE** Indicator light will light and beep, and remain lit until chlorine has been added to the system. See directions on page 5 under **Chlorinator Maintainance.**

System Odors

During the first few weeks of system operation, the system must establish itself and it is common for odors to develop around the system and its components. After the first month of operation, these should go away. A normally functioning system will have a damp, musty type odor. Foul odors can be present and the system indicate that the mechanical components are properly functioning. Please be certain that you are not using any of the materials specifically mentioned to cause problems with the system on the first paragraph of page one of this manual. If you are, discontinue their use and the problem within a few weeks should clear up by itself. If you are not using any of the items, or you have discontinued their use and the problem has not corrected itself, then call your service provider for assistance.

How The Night Pumper System Works

The system controls the pump based on a time clock principle. Each day at sun up, an internal clock begins a count down. 20 hours after sun up the system will pump out the tank. Upon initial start up of system, or after a power failure, the internal clock assumes daylight just occurred. The system starts the 20 hour clock till pump down. If night comes, and daylight then occurs before the 20 hours has passed, then the pump will automatically pump out at daybreak.

Water Over-Use

If at any time more than 360 gallons of water enter the system between pump cycles, (the maximum allowed for a 5 bedroom home) then the system must come on in a demand configuration mode. Thirty seconds prior to pumping, the system will turn on an audible alarm, with two short beeps in a row. After 30 seconds, the alarm will silence and turn the pump on for maximum of 4 minutes. If the level drops below the high probe, the pump will run an additional 4 minutes.

If this does not lower the level below the high probe the pump will jog 10 times and will pump for an additional 4 minutes. If this does not lower the water level below the high probe, a **WATER LEVEL PROBLEM** will occur with a **SYSTEM ALARM** red light and audible alarm. This might occur if a hot tub, Jacuzzi or other large volume of water is released into the system all at once. It should be noted that hot tub or Jacuzzi water should never be released into an aerobic system. This alarm is designed to tell the warn Home Owner that a large volume of water being released into the system all at once can disturb the process and should be metered in more slowly. If the system persistently comes on in a demand configuration, then it should be noted that the household either, uses too much water and is sized too small, is wasteful with water, or has running toilets, etc. It should also be noted that no Aerobic system can function correctly if too much water is run through the system. To determine if there is a plumbing leak check the clean-out located before the tank inlet by sprinkling a small amount of dry dirt or sand. If the dirt washes away, the width of the stream can indicate how much water is being wasted. A stream as little as 1/8" wide can indicate a leak of as great as 150 gallons a day.

Residuals Pump Out of System

The Hoot Aerobic System is a sewage digestion system uses a mechanical process of aeration to accelerate the digestion process that would normally take place in the soil. Over time, there will be a build up of non-biodegradeable materials or residuials that will necessitate the system being pumped out. The pump out of the system will be based on a level of seteable solids in the areation chamber or evidence of soilds carry over into the pump tank. Qualified service personell will check for these levels during their inspection and will advise you when the system will need pumped out. This level will be affected by the number of residents in the home, their health and eating habits, use of paper products, quantity of garbage disposal use and non-biodegradeables added to the system.

Most systems that are plumbed to single family residences, and are properly designed, will go for a period of 2 to 4 years between pump outs. Factors mentioned above, and others not anticipated can cause the frequency between service to be longer or shorter. In all cases, it is advised to have the system pumped out when it is recommended. If the solids level is ignored, the system may malfunction, fail to treat the sewage properly and cause damage to pump and other components that will likley cost 2 to 3 times what a pump out would cost. Damage to these components from failing to pump out the system regularly would not be covered by any initial or extended warranty.

Intermitent use and Abandonment

Intermitent use of the system is not recomended. These systems are biological reactors and to maintain proper function must be used on a regular baisis. If the system is not to be used of an extended period of time it should be abandoned using the following proceedure. To properly abandon a system, you need to have the system pumped to remove all solids from the system. The system must then be refilled with water to the normal operating level and then disabled electrically.

Re-Start

If the system has been abandoned and power has been shut off to the system at any time, the system must be throughly pumped, filled with water and an inspection of all of the system componenets, including difuser operation and backpressure on the system. If the system, with clean water reads a high back pressure, then the stones must be replaced or flushed according to our proceedures for flushing.

Change of Ownership

Any time the system chanages ownership and new residents are to use the system, even if there is no electrical interuption, it is strongly recomended that the system be pumped, cleaned out and re-started. The biological flora and fauna of the aedrobic system are particular to the individuals using the system and a drastic change to the influent characteristics and load may serriously effect the performance of the system. Please note that this will also provide for a complete inspection of the system and its components and an opportunity to educate the new system ower of the type of system that they have, along with their duties and lilitations of their system.

LIMITED WARRANTY AND REGISTRATION

HOOT Aerobic Systems, Inc.

2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

NO GENERAL WARRANTY: HOOT AEROBIC SYSTEMS, INC. DISCLAIMS ANY AND ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, AND **EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

HOOT LIMITED WARRANTY: HOOT Aerobic Systems, Inc. ("HOOT") warrants faulty workmanship or construction of the HOOT treatment system for three (3) years from the date of purchase, subject to the following condition: If HOOT determines that the fault in workmanship or construction of the HOOT treatment system is not the result of improper installation, improper maintenance, failure to service, natural disaster, an act of God (including flood, lightning or fire ants), or tampering by any means, then, at HOOT's discretion, HOOT has the right to provide a replacement for such faulty component. The faulty component will be replaced with a rebuilt or new component to the Service Provider for the first three (3) years from the date of purchase. This Warranty extends to the HOOT Service Provider ONLY. During the initial 2 year service policy, the component will be replaced at no charge to the Homeowner. During the third year, components will be provided only to a qualified HOOT Service Provider, at no charge, however any and all installation charges will be the responsibility of the homeowner.

SOLE REMEDY

HOOT's liability for any accident, injury, or damage to any person or property shall be limited to the purchase price of the HOOT Aerobic Treatment System. HOOT is not and shall not be liable for any incidental or consequential damages or injury, regardless of fault, to any person or property resulting from misdesign or mismanufacture of the HOOT Aerobic Treatment System, failure to warn, failure to label, or inadequate instructions in the manual. This clause is effective to the full extent allowed by law and shall be void where prohibited.

WARRANTY REGISTRATION

FOR THE ABOVE WARRANTY TO BE EFFECTIVE, THE HOMEOWNER AND ANY USER ATTEMPTING TO CLAIM ANY RIGHT UNDER THIS WARRANTY MUST COMPLETE THIS FORM AND RETURN A SIGNED COPY TO HOOT WITHIN THIRTY (30) DAYS FROM THE DATE OF INSTALLATION. The cost of pumping or cleaning of any component or compartment of the sewage treatment system, which becomes necessary for causes other than malfunction of the equipment, is the responsibility of the homeowner.

By signing this Service Policy, the Home Owner and the Service Provider agree to the terms of this policy. HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	**SERVICE PROVIDER**
_____	_____
Name	Name of Service Company Representative
_____	_____
Address	Address
_____	_____
City	City
( ) - _____	( ) - _____
Phone	Phone
_____	_____
Signature of Home Owner	Signature of Service Provider and License #.

Service and Inspection Form

(This is an example only, please check State and Local Requirements)

This testing and reporting shall be completed, signed and dated after each inspection. One copy shall be retained by the maintenance company. The second copy is sent to the local permitting authority and the third copy is sent to the system owner along with an invoice for services by the maintenance company.

1. Actual Date of Visit: _____

2. System Inspection of: Owner: _____
   Address: _____
   City, St., Zip: _____

Inspected Items:	Operational	Inoperative	Not Applicable
Aerator.....	☐	☐	☐
Aeration Plumbing.....	☐	☐	☐
Air Filter.....	☐	☐	☐
Effluent Pump.....	☐	☐	☐
Chlorinator.....	☐	☐	☐
OK System Light.....	☐	☐	☐
Probe.....	☐	☐	☐
Sprinkler/Drip Backwash.....	☐	☐	☐
Photocell Test.....	☐	☐	☐
Battery.....	☐	☐	☐

Battery must be replaced once each year. Air Filter must be cleaned each service visit. Operation of effluent disposal system must be made each visit, including chlorine residual test, effluent pump operation and sprinkler operation/ drip backwash.

3. Repairs to system (list all components replaced):_____

4. Tests Required and Results:

Test	Required	Results	Test Method
BOD (Grab)	☐	_____	_____
TSS (Grab)	☐	_____	_____
Fecal Coliform	☐	_____	_____
Chlorine Residual	☐	_____	_____

5.Comments:_____
_____
_____

Signature of Inspector:_____Installer II or WW Lic # _____

For Additional Information, Please Contact:

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2885 Highway 14 East Lake Charles, LA 70607
(337) 474-2804 phone (337) 477-7904 fax

www.hootsystems.com

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APPENDIX D

RESIDENTIAL WASTEWATER TREATMENT SYSTEM SPECIFICATIONS

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DRAWINGS

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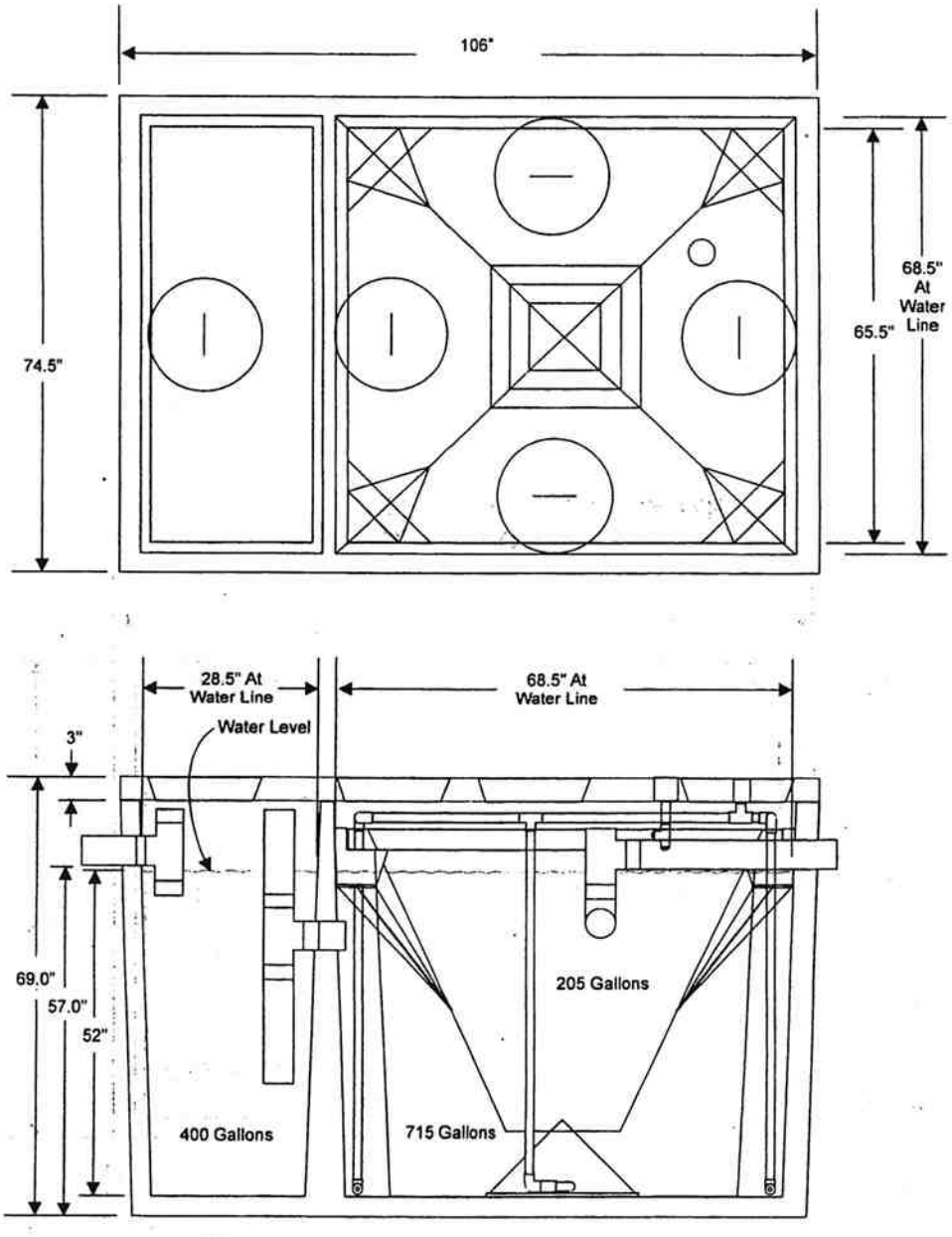
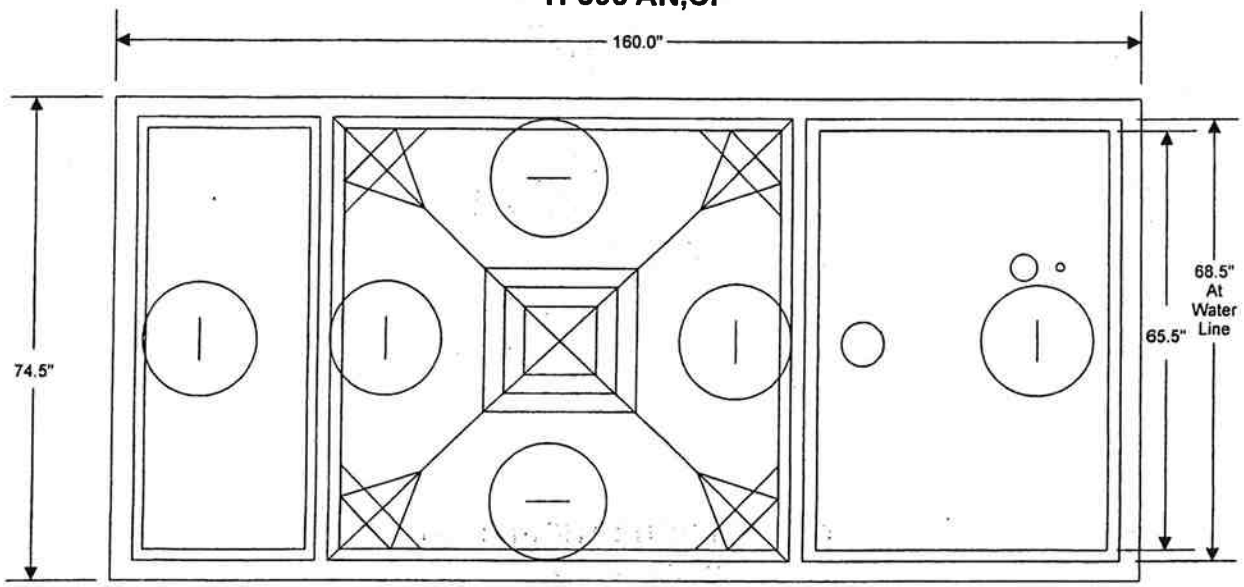
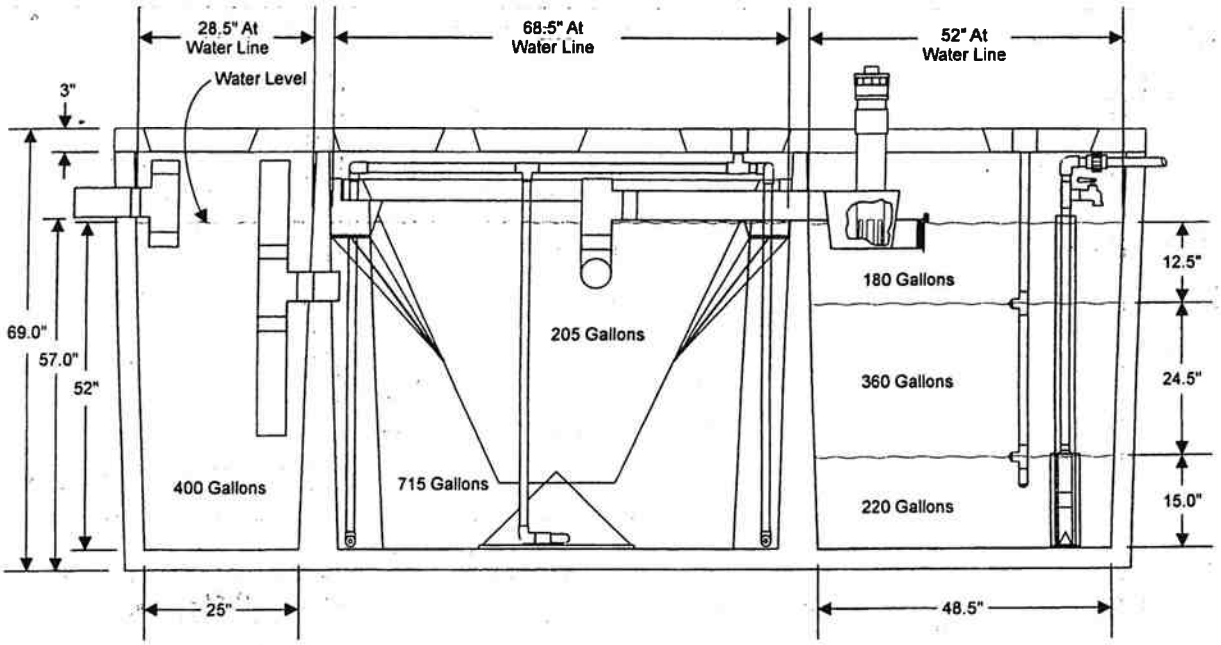
500 GPD GRAVITY DISCHARGE SYSTEM
H-500 A,CP



2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

500 GPD NIGHT PUMPING SYSTEM
H-500 AN,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

4.187' Avg. Length
5.600' Avg. Width
4.333' Depth

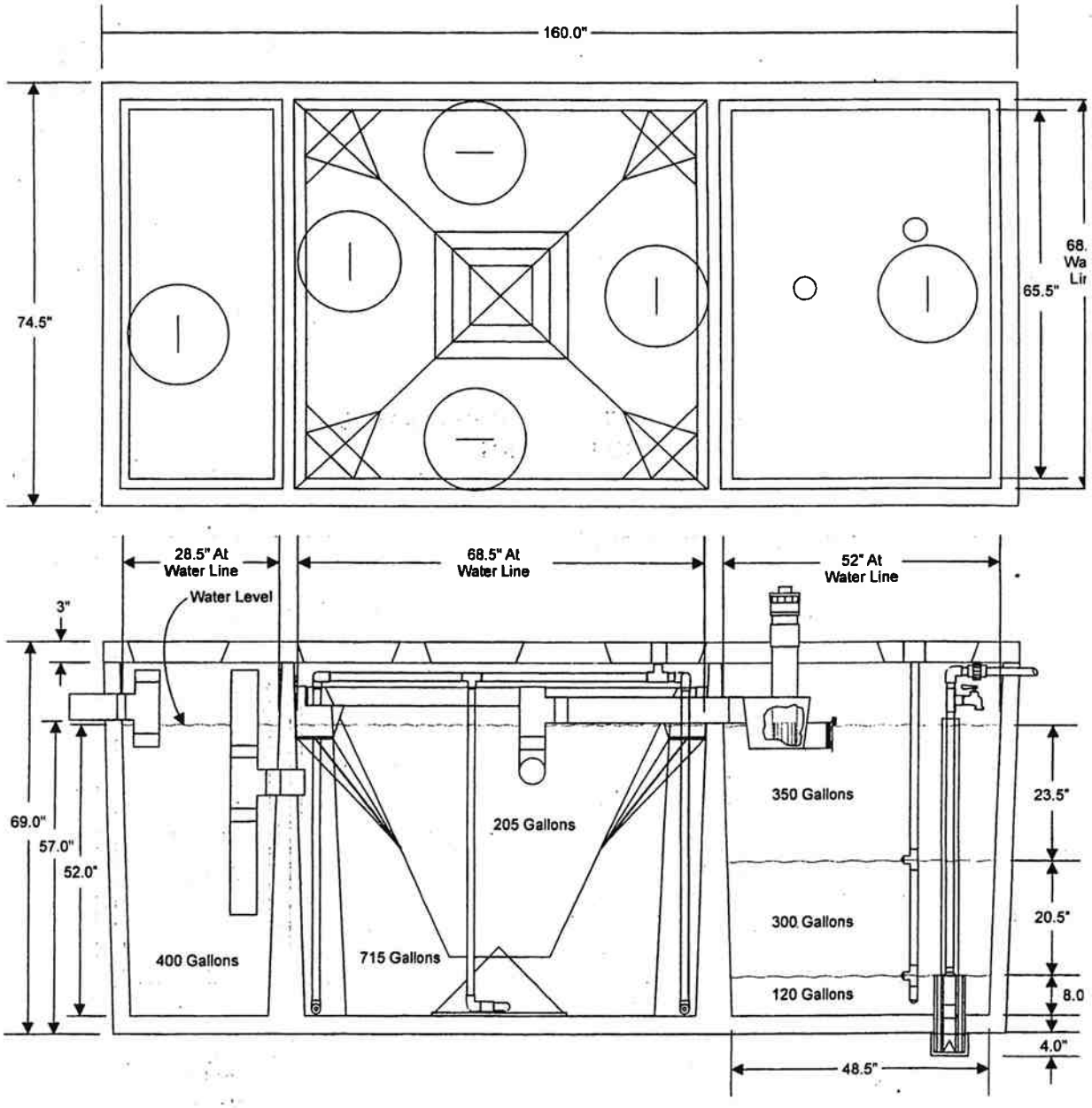
760 Gallons
220 Gallons Remaining In Tank

540 Gallons Holding Capacity

Rev. 07

6/08/99

500 GPD NIGHT PUMPING SYSTEM
H-500 AH,CP



2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

4.187' Avg. Length
5.600' Avg. Width
4.333' Depth

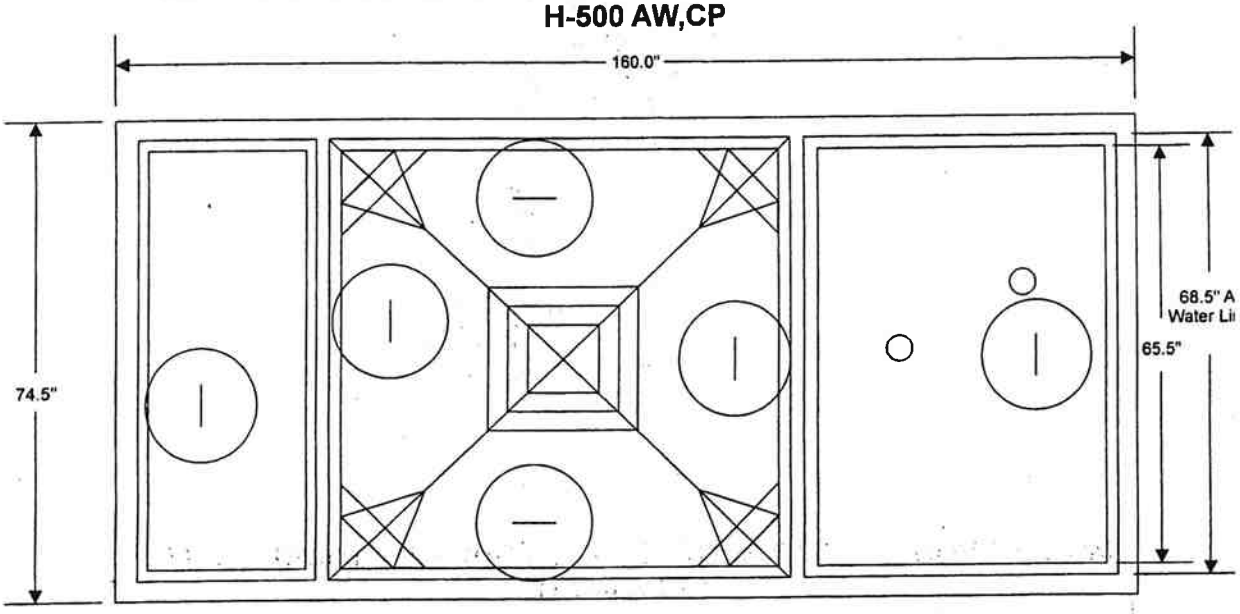
760 Gallons
110 Gallons Remaining In Tank

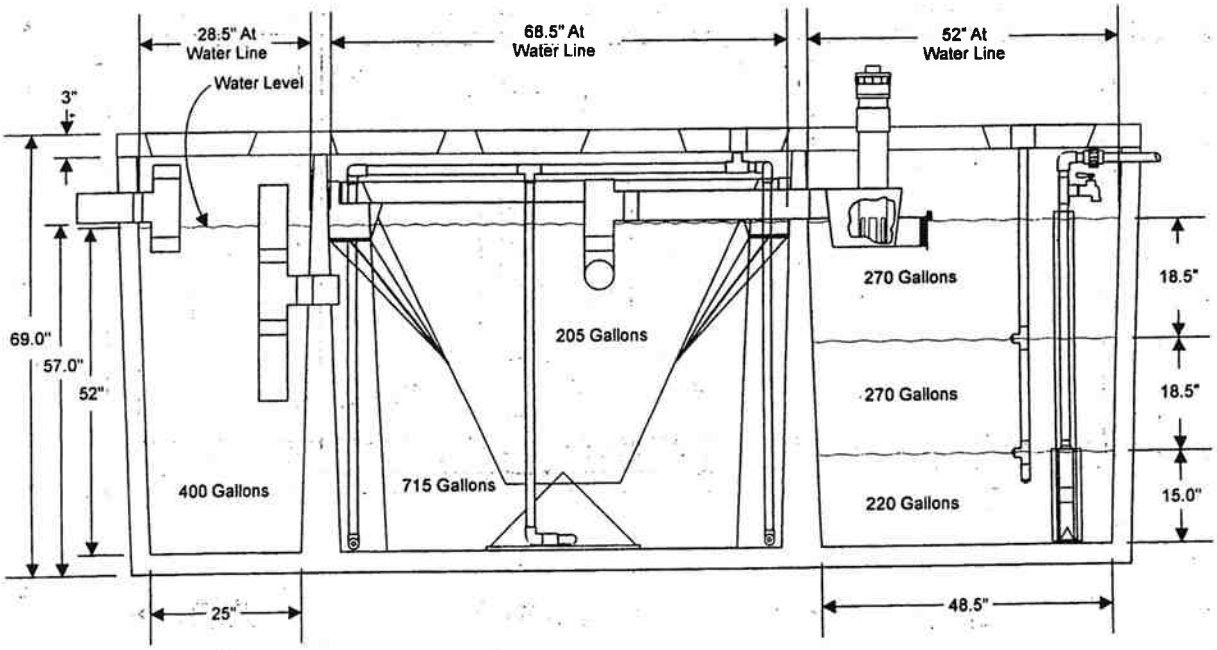
650 Gallons Holding Capacity

Rev. 04

6/08/99

500 GPD NIGHT PUMPING SYSTEM WITH FULL DAY ABOVE ALARM
H-500 AW,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

4.187' Avg. Length
5.600' Avg. Width
4.333' Depth

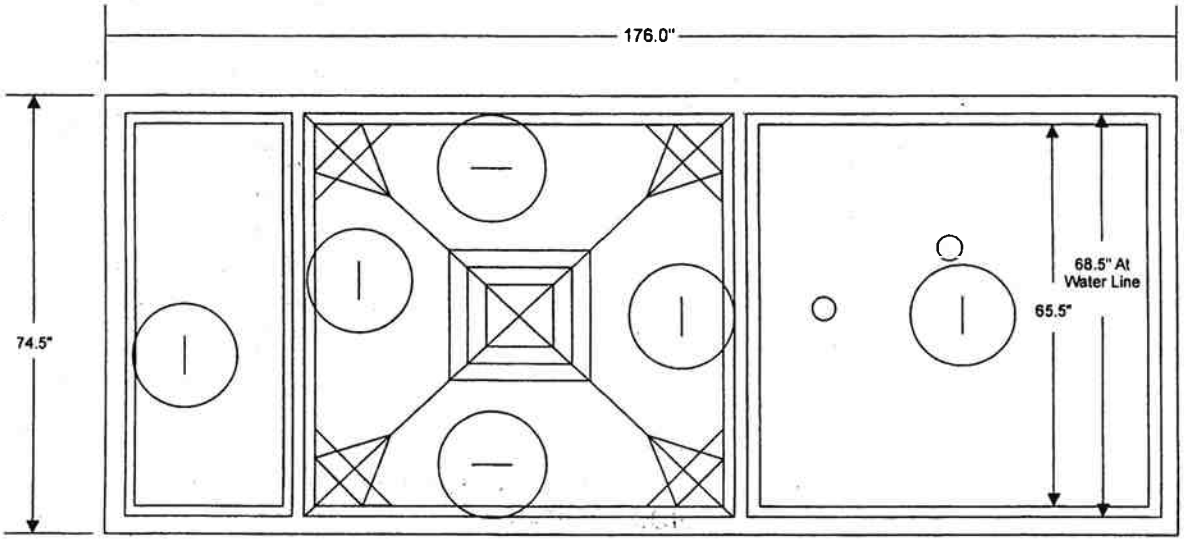
760 Gallons
220 Gallons Remaining In Tank

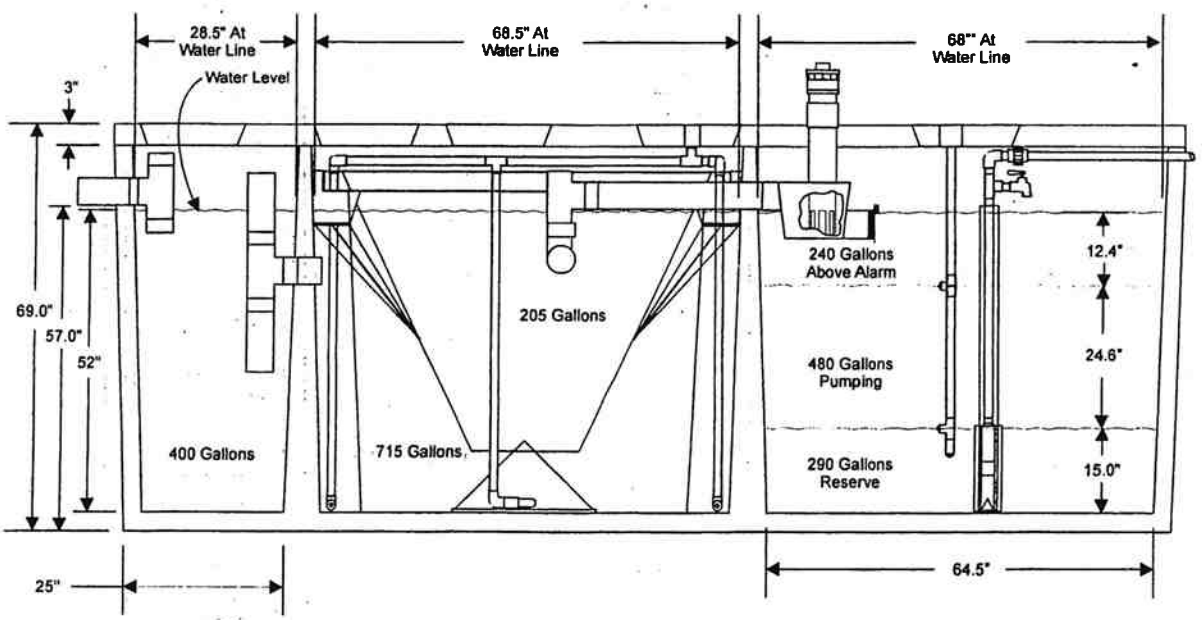
540 Gallons Holding Capacity

Rev. 02

6/08/99

500 GPD NIGHT PUMPING SYSTEM
H-500 AS,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

5.521"' Avg. Length
5.600' Avg. Width
4.333' Depth

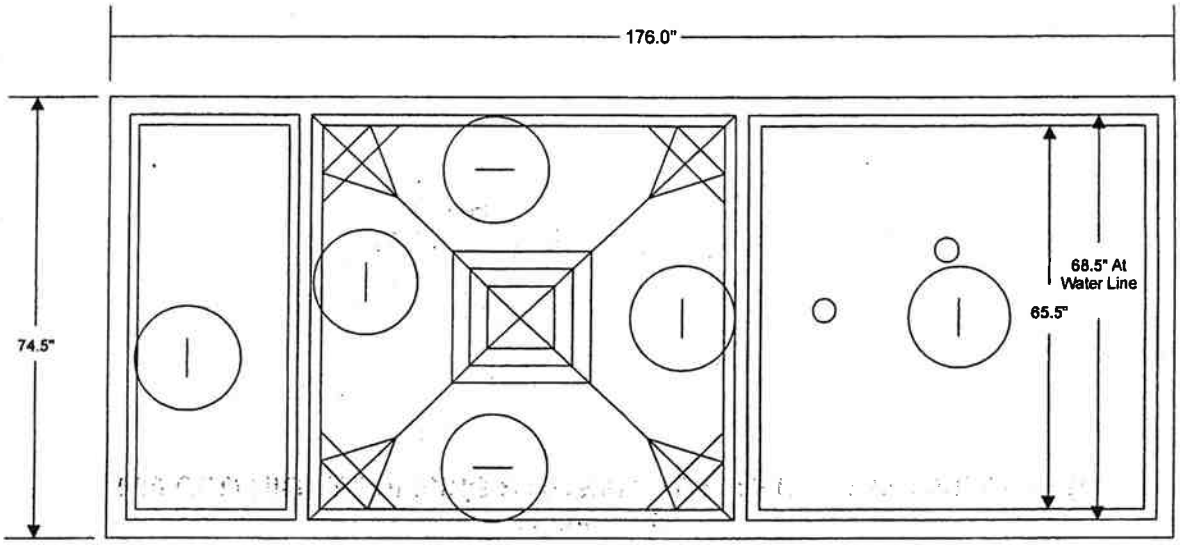
1010 Gallons
290 Gallons Remaining In Tank

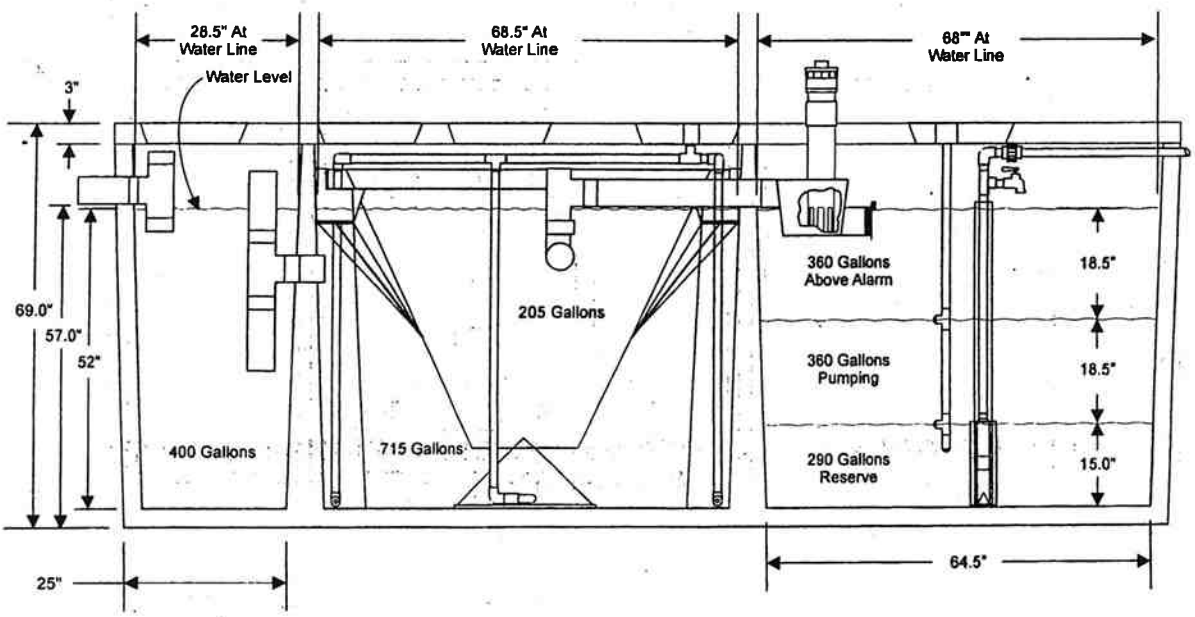
720 Gallons Holding Capacity

Rev. 02

8/15/99

500 GPD NIGHT PUMPING SYSTEM WITH FULL DAY ABOVE ALARM
H-500 AT,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

5.521"' Avg. Length
5.600' Avg. Width
4.333' Depth

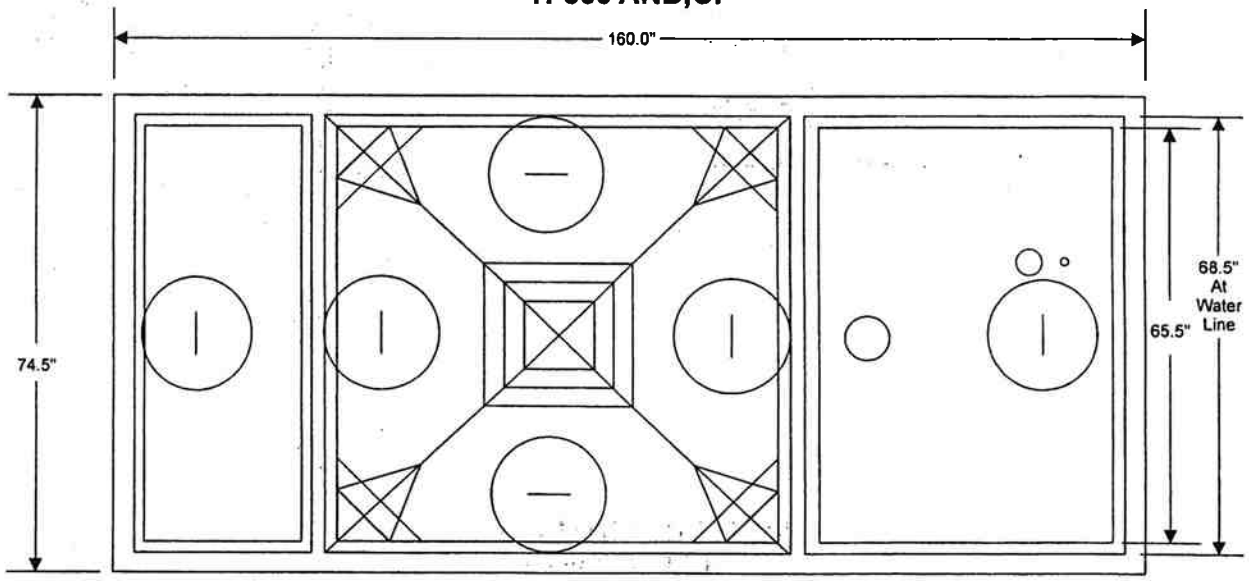
1010 Gallons
290 Gallons Remaining In Tank

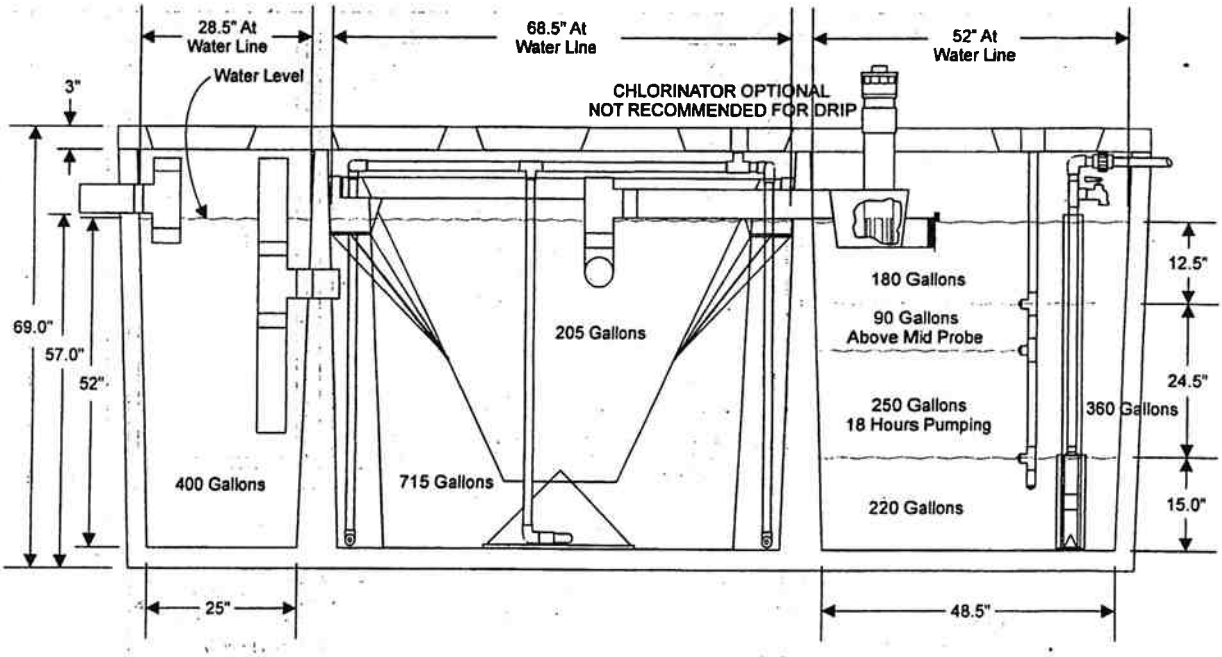
720 Gallons Holding Capacity

Rev. 03

6/08/99

500 GPD DRIP SYSTEM
H-500 AND,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

4.187' Avg. Length
5.600' Avg. Width
4.333' Depth

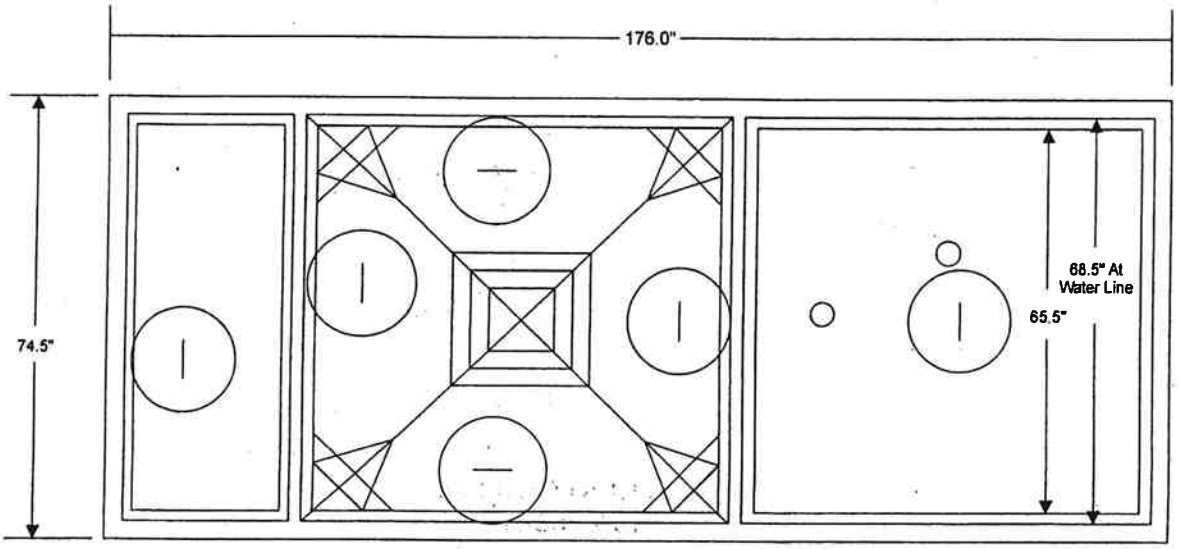
760 Gallons
220 Gallons Remaining In Tank

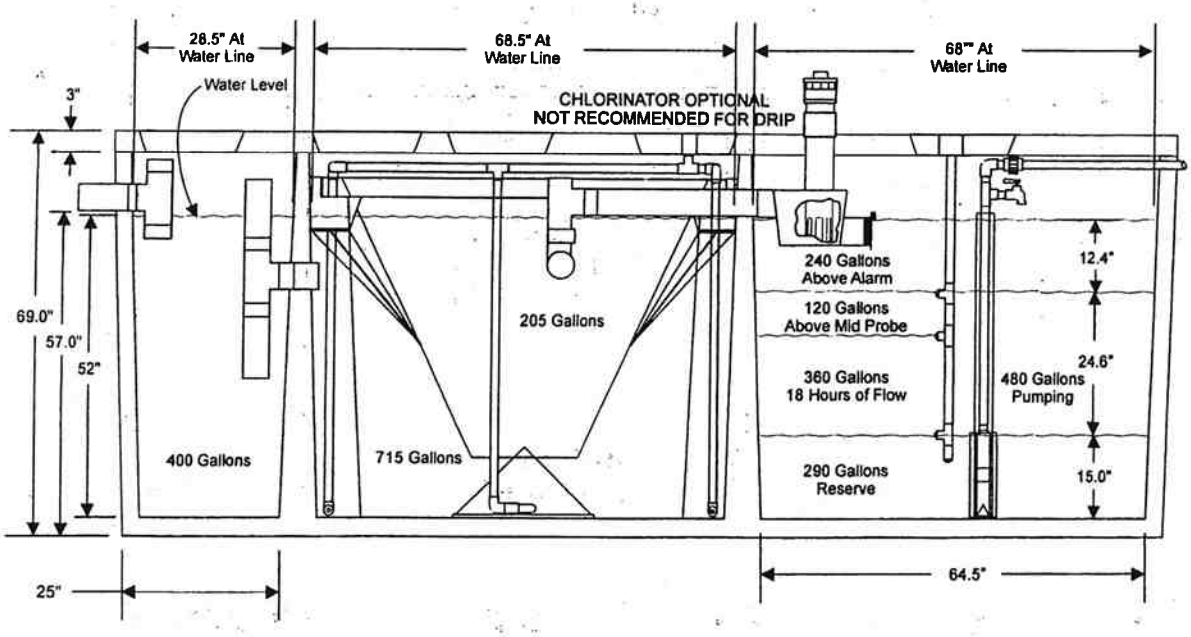
540 Gallons Holding Capacity

Rev. 03

2/27/01

500 GPD DRIP SYSTEM
H-500 ASD,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

5.521"' Avg. Length
5.600' Avg. Width
4.333' Depth

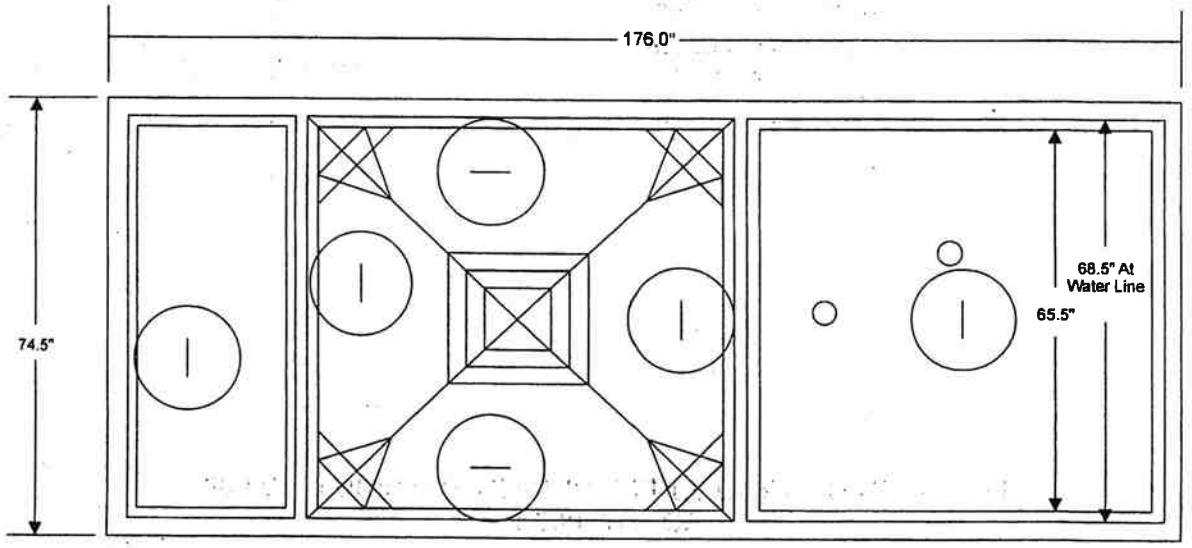
1010 Gallons
290 Gallons Remaining In Tank

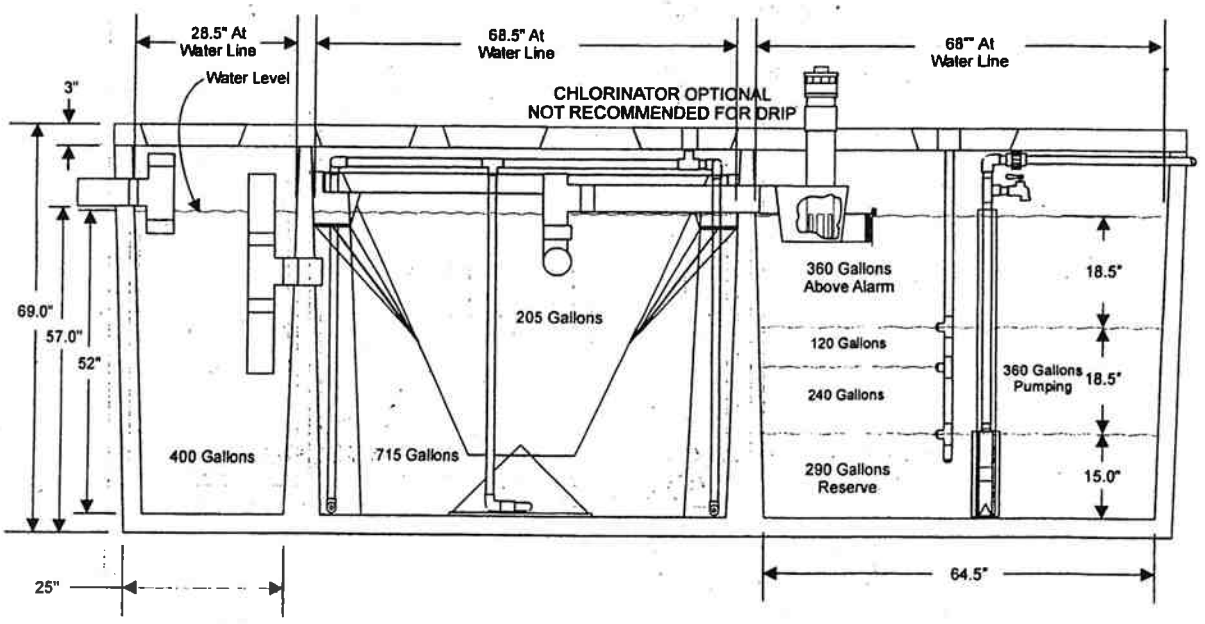
720 Gallons Holding Capacity

Rev. 03

2/27/01

500 GPD DRIP SYSTEM WITH FULL DAY ABOVE ALARM
H-500 ATD,CP





2.229' Avg. Length
5.600' Avg. Width
4.333' Depth

5.521"' Avg. Length
5.600' Avg. Width
4.333' Depth

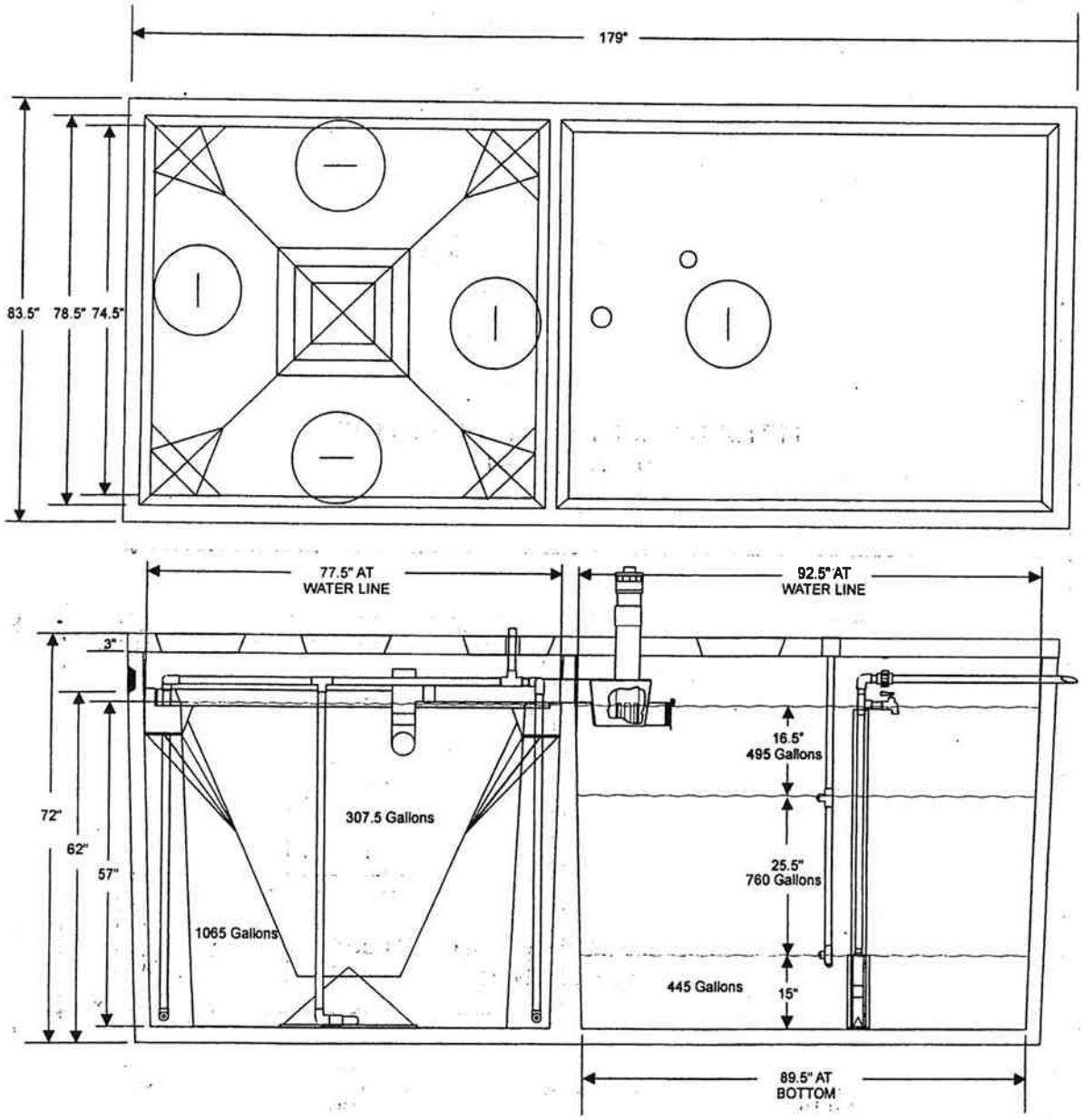
1010 Gallons
290 Gallons Remaining In Tank

720 Gallons Holding Capacity

Rev. 02

2/27/01

750 GPD NIGHT PUMPING SYSTEM
H-750 AN,CP



76" Avg. Length
76" Avg. Width
57" Depth

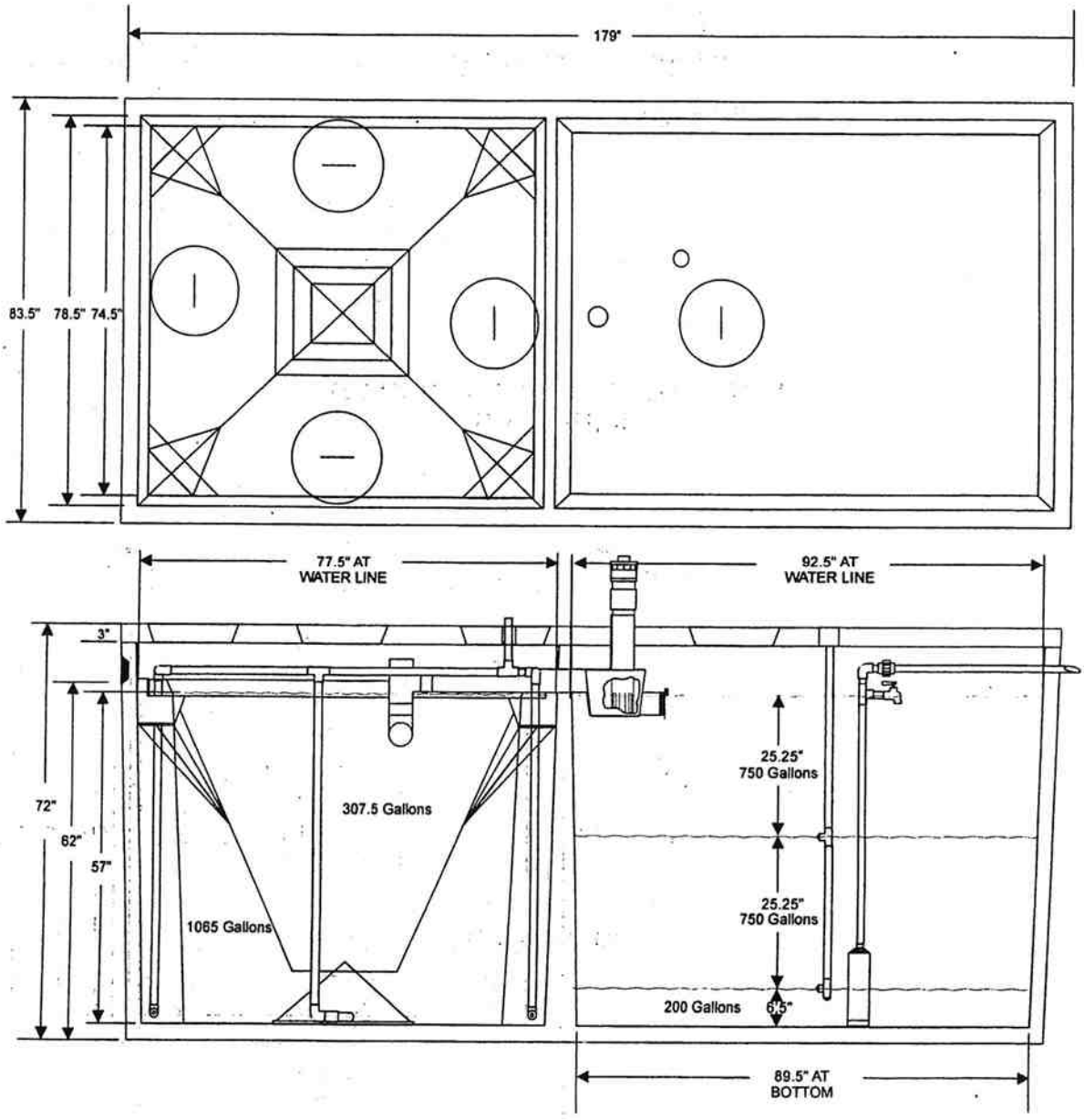
91" Avg. Length
76" Avg. Width
57" Depth

1700 Gallons
445 Gallons Remaining In Tank
1255 Gallons Pumping Capacity

Rev. 06

5/08/01

750 GPD NIGHT PUMPING SYSTEM
H-750 AH,CP



76" Avg. Length
76" Avg. Width
57" Depth

91" Avg. Length
76" Avg. Width
57" Depth

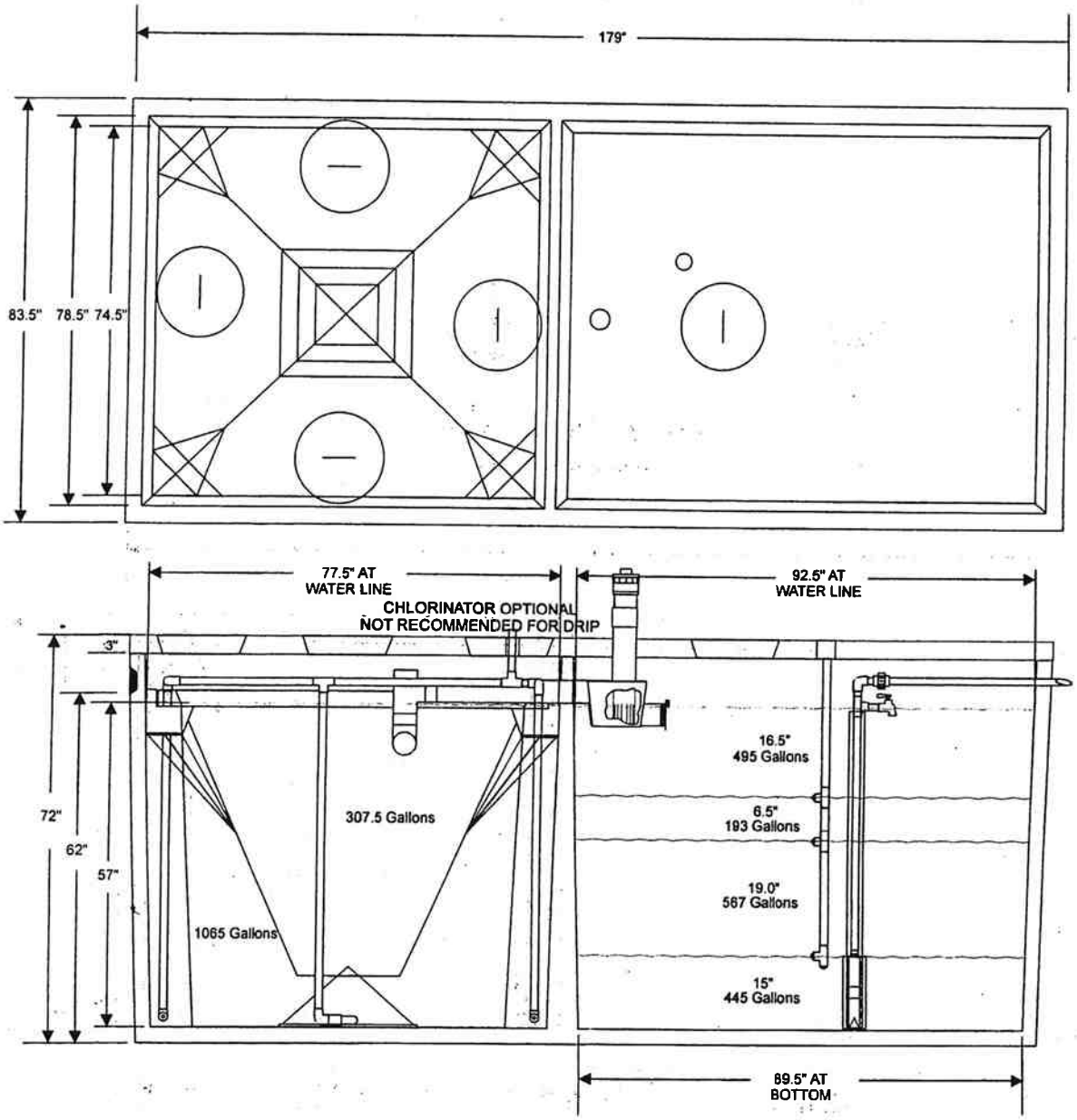
1700 Gallons
200 Gallons Remaining In Tank

1500 Gallons Pumping Capacity

Rev. 04

5/08/01

750 GPD DRIP SYSTEM
H-750 AND,CP



76" Avg. Length
76" Avg. Width
57" Depth

91" Avg. Length
76" Avg. Width
57" Depth

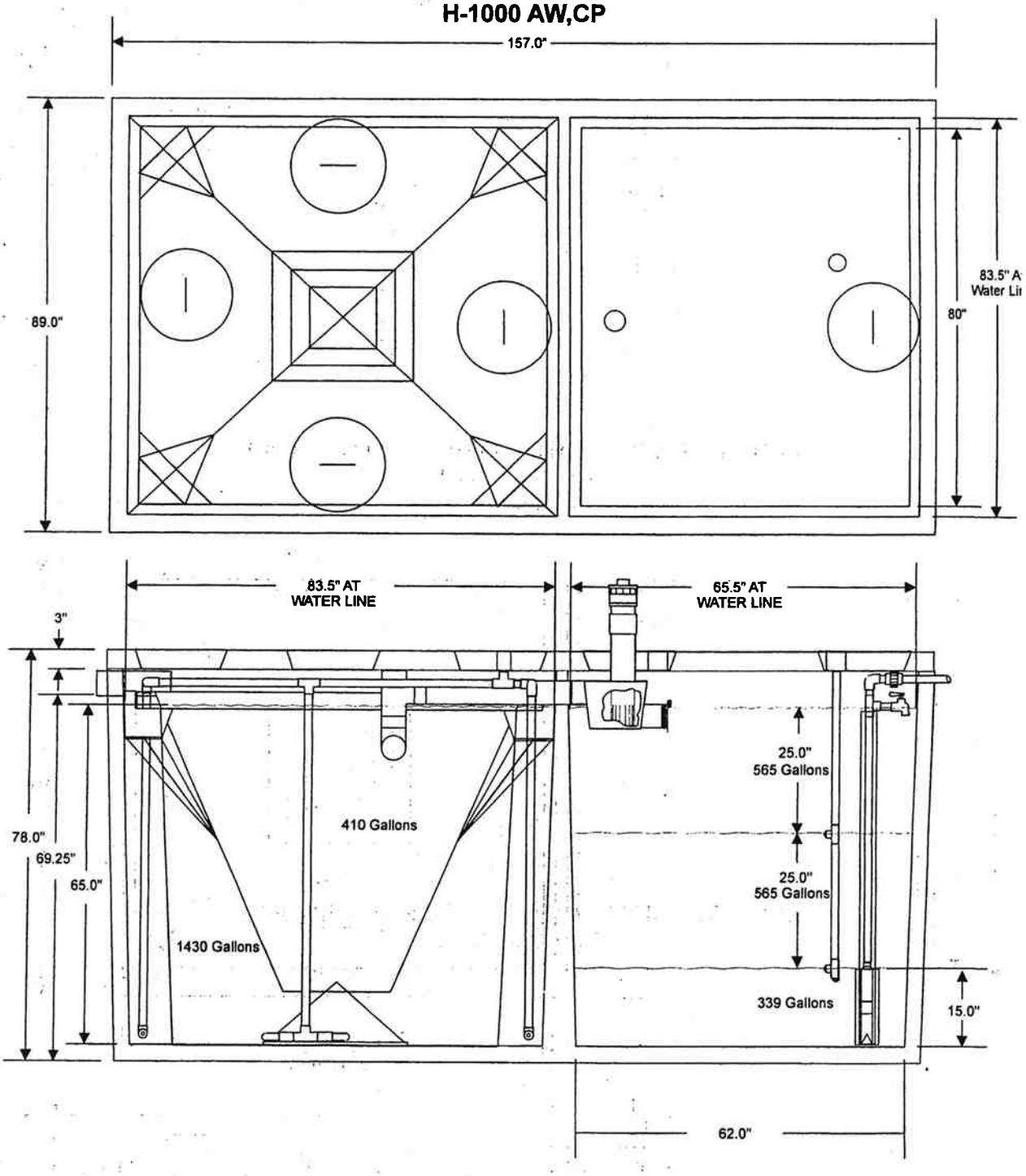
1700 Gallons
445 Gallons Remaining In Tank

1255 Gallons Pumping Capacity

Rev. 01

12/01/01

1000 GPD DEMAND / NIGHT PUMPING SYSTEM
H-1000 AW,CP



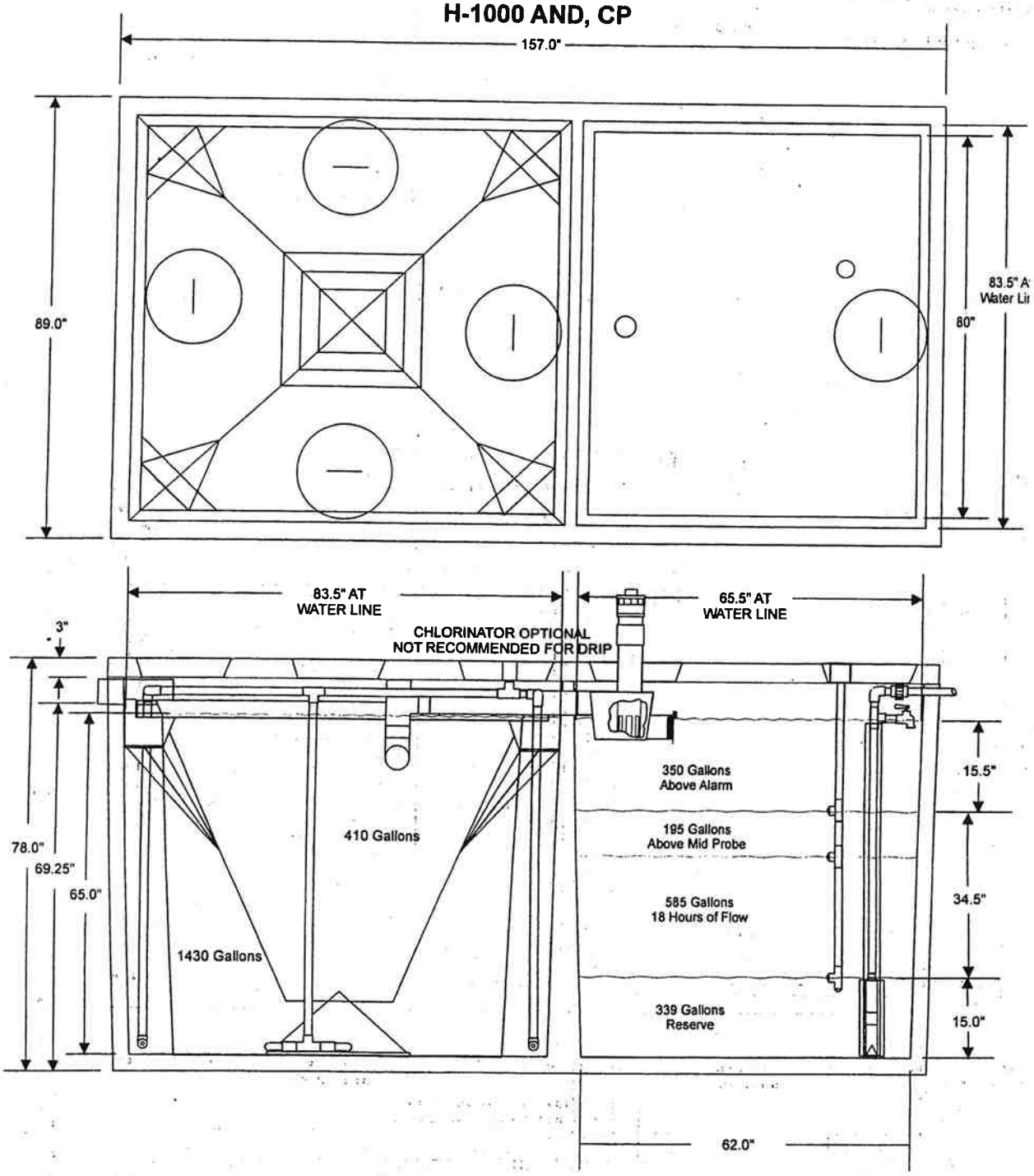
5.312' Avg. Length
6.812' Avg. Width
5.416' Depth

1469 Gallons
339 Gallons Remaining In Tank
1130 Gallons Pumping Capacity

Rev. 02

2/27/01

1000 GPD DRIP SYSTEM
H-1000 AND, CP



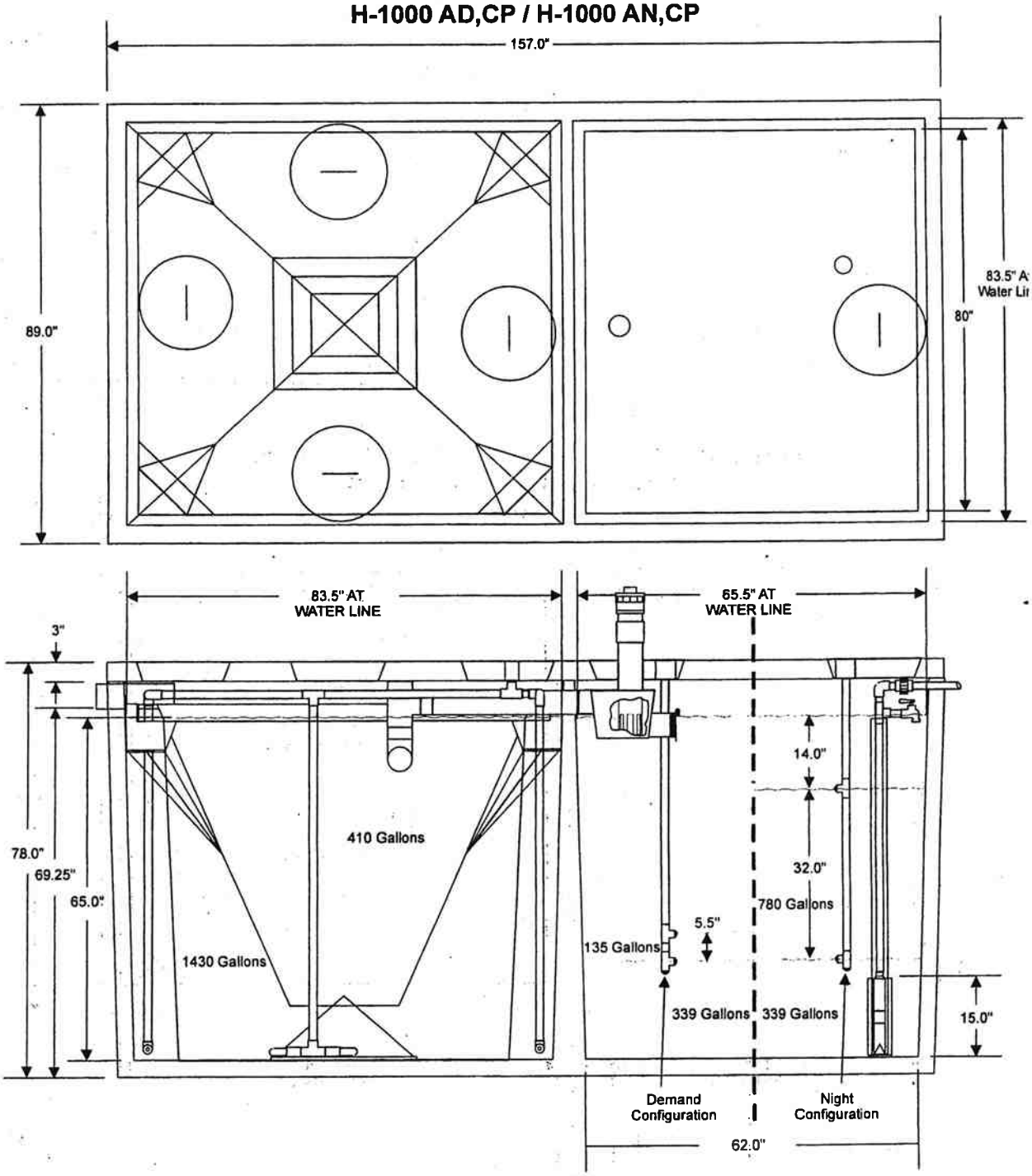
5.312' Avg. Length
6.812' Avg. Width
5.416' Depth

1469 Gallons
339 Gallons Remaining In Tank
1130 Gallons Pumping Capacity

Rev. 02

12/01/01

1000 GPD DEMAND / NIGHT PUMPING SYSTEM
H-1000 AD,CP / H-1000 AN,CP



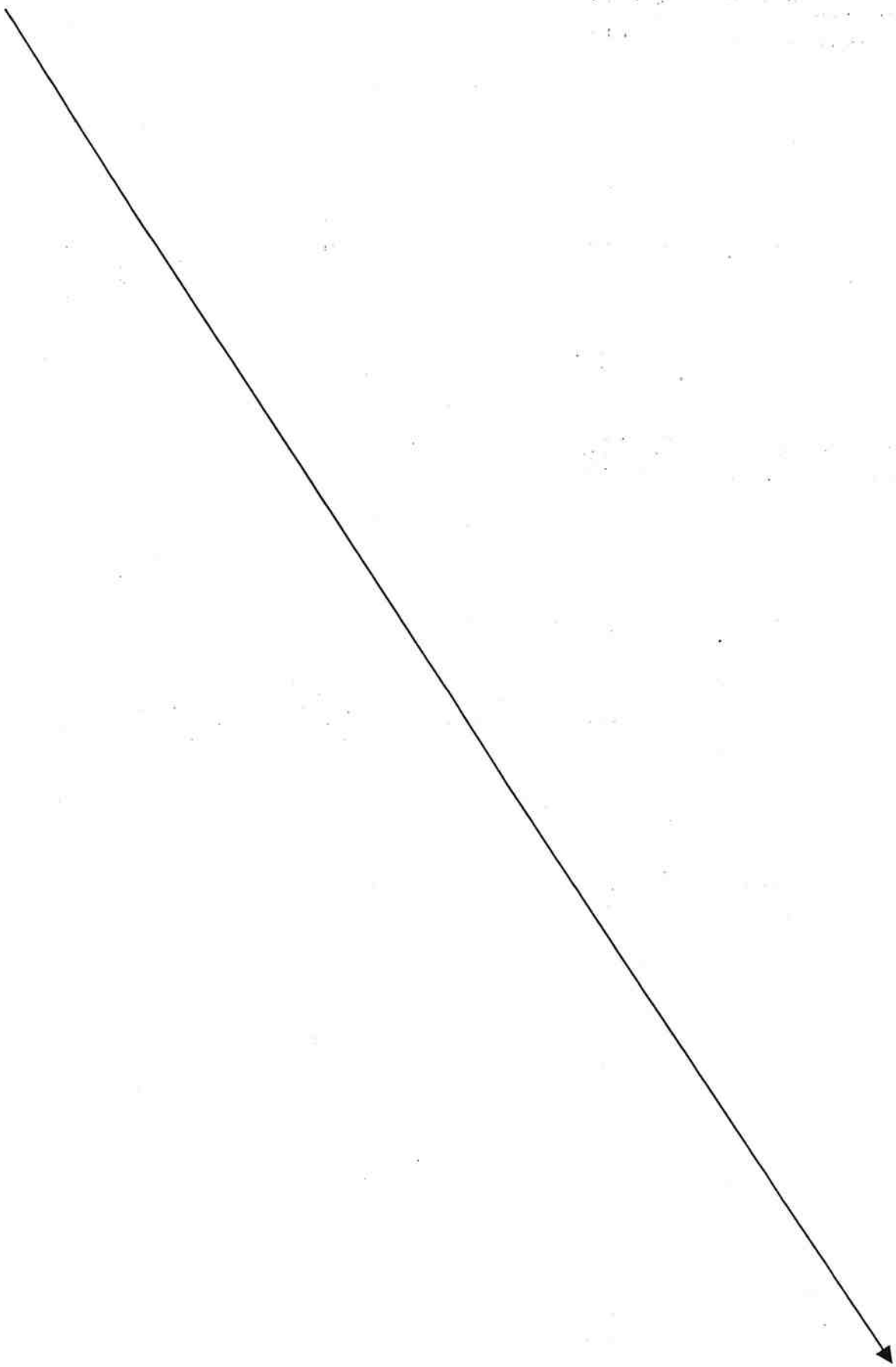
5.312' Avg. Length
6.812' Avg. Width
5.416' Depth

1469 Gallons
339 Gallons Remaining In Tank

1130 Gallons Pumping Capacity

Rev. 07

12/01/01



HOME OWNER'S MANUAL

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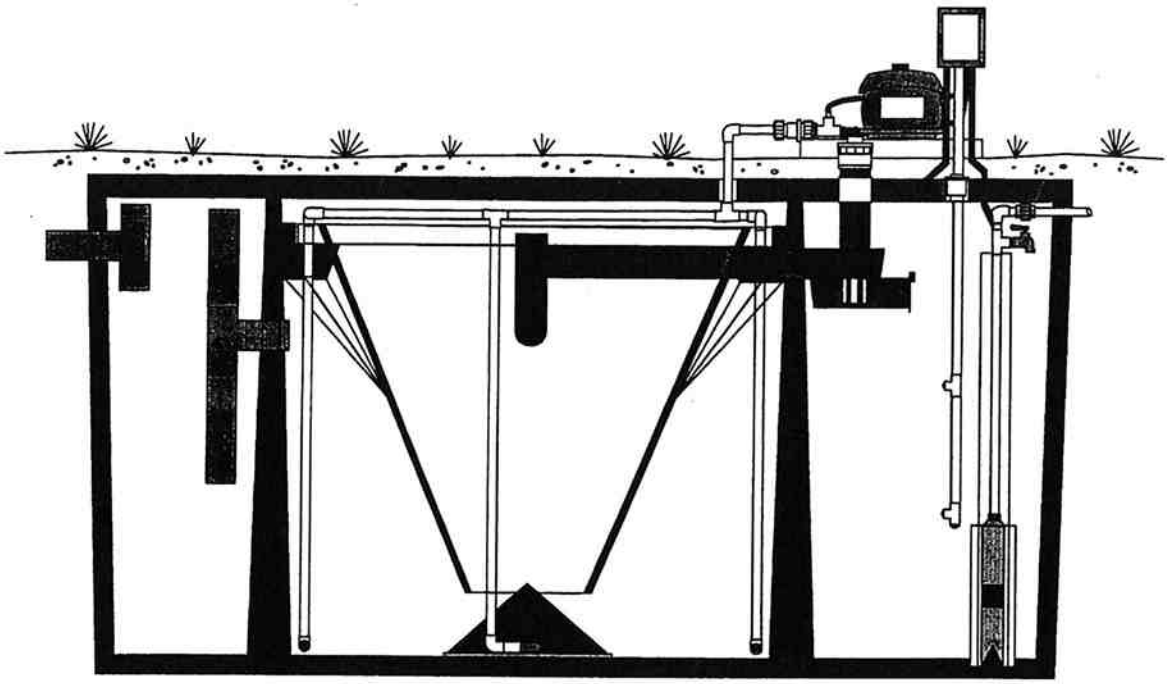
HOOT AEROBIC TREATMENT SYSTEMS

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

Homeowners Manual

This Product has been tested in accordance with the criteria set forth in the ANSI/NSF Standard 40 and is hereby certified as a Class I Aerobic Wastewater Treatment Plant.



The HOOT Aerobic Treatment System
Declaration of Warnings

WARNING! TO PREVENT MALFUNCTION OF YOUR SEWAGE SYSTEM, DO NOT DISCHARGE THE FOLLOWING MATERIALS INTO THE SYSTEM: Plastic Materials ! Cloth ! Cigarette Stubs ! Paper towels ! Large quantities of acids or caustics, soaps or cleaning materials which have a high or low pH factor (Use low suds detergents) ! Throw-away Diapers ! Rubber products ! Kleenex, some toilet tissues which do not decompose readily in water ! Rainwater from Gutters ! Excess grease or fatty materials (Use garbage disposal sparingly) ! Oily materials, motor oils, grease, kerosene, gasoline, Paints, etc. ! **BACKWASH WATER FROM WATER SOFTENERS OF ANY TYPE** ! Other materials which do not disintegrate in water ! A/C Discharge ! Sump pump discharge

WARNING! TO FUNCTION PROPERLY, THE HOOT SYSTEM MUST BE MAINTAINED BY A QUALIFIED PROFESSIONAL AT LEAST EVERY SIX (6) MONTHS FOR THE LIFE OF THE SYSTEM. FAILURE TO MAINTAIN THE HOOT SYSTEM VOIDS THE LIMITED WARRANTY AND MAY CAUSE SERIOUS BODILY INJURY OR ILLNESS TO PEOPLE AND PETS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM OR OTHER PROPERTY.

DANGER! ONLY A QUALIFIED PROFESSIONAL SHOULD ATTEMPT TO REPAIR OR FIX THE HOOT SYSTEM. ATTEMPTED REPAIR BY ANYONE OTHER THAN A QUALIFIED PROFESSIONAL MAY CAUSE SERIOUS BODILY INJURY OR DEATH TO THE HOMEOWNER OR OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT DISCONNECT THE POWER TO THE HOOT SYSTEM. DISCONNECTION OF THE POWER FROM THE SYSTEM MAY CAUSE SERIOUS ILLNESS OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IN CASE OF IMMINENT FLOOD, IMMEDIATELY TURN OFF THE ELECTRICAL POWER TO THE HOOT SYSTEM AT THE INDEPENDENT BREAKER LOCATED ON THE HOUSE. FAILURE TO TURN OFF THE ELECTRICAL POWER MAY CAUSE SERIOUS INJURY OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IF THE UNIT FAILS TO FUNCTION PROPERLY, DO NOT USE THE BATHROOM FACILITIES UNTIL QUALIFIED PERSONNEL FIX THE PROBLEM. USE OF THE BATHROOM FACILITIES DURING A SYSTEM FAILURE MAY CAUSE SERIOUS INJURY, ILLNESS, OR DEATH TO PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! DO NOT ALLOW CHILDREN TO PLAY ON OR AROUND THE AEROBIC TREATMENT SYSTEM, THE SPRINKLER SYSTEM, OR OTHER OVER-LAND DISCHARGE AREA. ALLOWING CHILDREN TO PLAY IN THESE AREAS MAY CAUSE SERIOUS BODILY INJURY, ILLNESS, OR DEATH TO THE CHILDREN AND OTHER PERSONS AND MAY CAUSE DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT OPEN CONTROL PANEL WITHOUT ELECTRICITY DISCONTENTED AND LOCKED OUT ON THE SYSTEM. FAILURE TO DO SO COULD CAUSE SEVERE INJURY OR DEATH

Table Of Contents

Overview of Sewage Treatment

The treatment system is comprised of four components, namely a pretreatment tank, aeration chamber, final clairfier and a disinfection device. The pre-treatment tank aids in the anaerobic decomposition of the influent and provides a storage area for non-biodegradables which are inadvertently added to the system. The aeration chamber is the heart of the activated sewage treatment plant. By means of a blower, oxygen is incorporated into the sewage. This introduction of oxygen is done in such a manner as to intimately mix the organics of the sewage with the bacterial populations in the aeration chamber. Reduction of the organics is accomplished by these organisms. Movement of sewage in the aeration chamber causes the activated sludge that settled in the final clarifier to be re-introduced into the aeration chamber. As the solids settle out in the clairifier, a clear odorless effluent is produced which passes through the disinfection device, and into the pump tank for discharge at a later time. All HOOT systems have a minimum of a ½ days flow above the alarm to give ample time for service personnel to arrive and correct any problem which may occur.

The ANSI/NSF Standard 40 requires a minimum removal efficiency for the performance of Aerobic Wastewater Treatment Systems. For a system to be certified as a Class I Treatment unit the arithmetic mean of all effluent samples collected in a seven day period must be less than 45 mg/L. The HOOT Aerobic System had an average $CBOD_5$ of 2.4 and a Suspended Solids average of 1.8 with both averaging 99% removal efficiency.

The effluent quality was found to meet or exceed state and federal standards for all other required parameters. According to these results, the HOOT unit is the most efficient wastewater treatment systems on the market today.

The HOOT Aerobic Treatment System Diagram

1. **Inlet** - where the wastewater enters the system from the home

2. **Pretreatment Tank** - where anaerobic digestion occurs and storage for non-biodegradeable materials

3. **Aeration Chamber** - where air is introduced into the sewage for digestion

4. **Clarifier** - a still chamber where solids settle out and the clear effluent rises

5. **Chlorinator** kills any remaining biological activity in the water entering the pump tank.

6. **Pump Tank** - where the treated and disinfected effluent is stored prior to discharge

7. **Effluent Pump** - how the treated water is discharged from the system

8. **Discharge Line** - to the disposal method prescribed by law or chosen by installer

9. **Sampling Port** - used by service personnel to inspect effluent quality

10. **Probe** - turns on and off the pump based on water level

11. **Pump Wire** - from pump to the control panel

12. **HOOT System Controller** - operates and regulates the control of the system

13. **Power Line (30 Amp)** - independent breaker provided by homeowner, builder or qualified electrician, necessary for proper operation of the system

14. **Troy Air Linear Air Blower** - long life, efficient linear blower which compresses atmospheric air and under pressure delivers it to the tank

15. **Air Manifold** - delivers the air from the line to the stones for diffusion into the sewage

16. **Aeration line** - delivers the air from the pump to the manifold

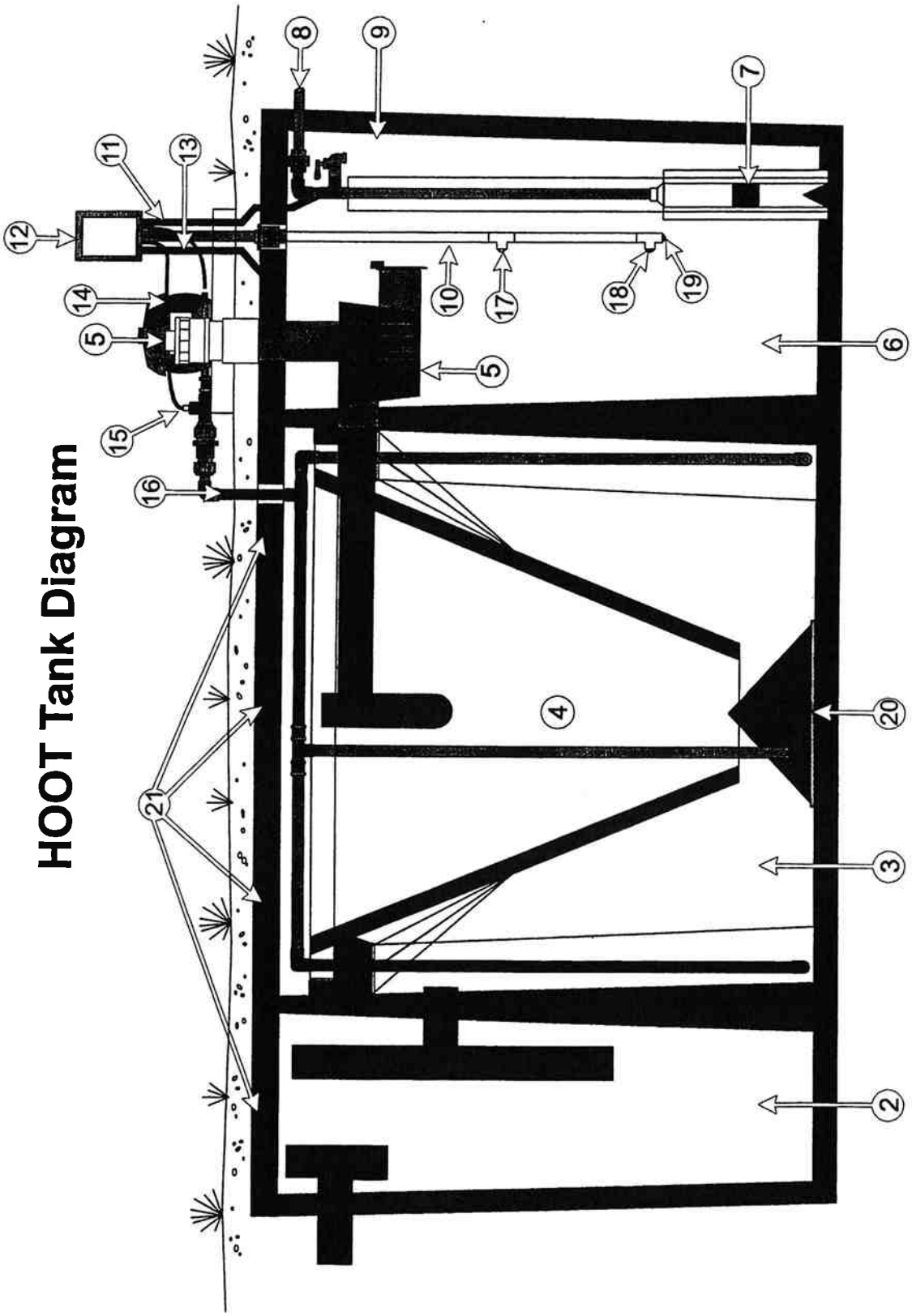
17. **High Water Probe** - turns the pump on - also alarm probe if pump fails to come on

18. **Low Water Probe** - the off switch for the pump

19. **Probe Ground** - generates the low level signal in the water which is sensed by the probes

20. **Aeration Stone** - air is finely diffused from the stone into the aeration chamber

21. **15" Covers** - provide access to each component of the system for service. Are usually brought to grade level to meet local regulations and for serviceability.


HOOT Tank Diagram
8
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13
12
10
17
18
19
14
5
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5
15
16
4
20
21
3
2

Chlorine Maintenance

ADD CHLORINE light will come on when the tablet level is between 1 and 2 tablets remaining. According to state law, It is the homeowners responsibility to maintain a chlorine residual in the pump tank of at least 1.0 mg/L. This can be achieved by keeping tablets, designed for the disinfection of wastewater in your chlorinator. To add tablets, remove the tube and follower, and clean out old tablets and residue. HOOT recommends filling the tube with approximately 1 months supply or 3 to 5 tablets, depending on use. A general rule is 1 tablet, per person, per month. Regulations may require more to be added at a time. Monitor the chlorine use, as well as the light, to determine when to add tablets to the tube. Carefully lower the dispenser tube into the chlorinator and reinstall the follower. Do not drop a tube filled with tablets. Damage to the dispenser, tube or tablets will occur and will not be covered by the warranty.

Chlorine Misuse Warning

Improper chlorine use can cause sever damage to the probe, pump and other components integral to the Hoot System. It can also create hazardous health conditions for those with exposure to the application area. The proper chlorine tablets are available from every Hoot Installer. They are specially formulated for small waste water flows and are an anti-wicking Calcium Hypochlorite formula. They are EPA registered and minimize excess residuals in the environment which may prove harmful to human or other life.

Environmental Protection Agency personnel are targeting the misapplication of chlorine products for more stringent enforcement. According to the E.P.A. the use of swimming pool chlorine in the treatment of waste water effluent is a violation of the Federal Insecticide, Fungicide, and Rodenticide Act Sections 136n-2g and 136j(a)g. The F.H.F.R.A . regulations essentially state anyone who is using a chlorine product for applications other than those stated on the product's labeling is potentially subject to fines or imprisonment. Individual users can be fined $500.00 for the first offenses and $2000.00 for subsequent violations.

Service Policy

The initial service policy, which covers the first two years of system operation, is included in the purchase price of every HOOT Aerobic Treatment System. During the first two years of system ownership, the homeowner is entitled to all service, sampling and inspection calls required by local regulatory officials. This will include a complete inspection of each component of the system, and any adjustments or servicing necessary to any electrical, mechanical and other component parts to ensure proper function. During the inspection, an effluent quality observation will be made as well. If there are any items which need corrected and can not be immediately remedied, you, the installer/inspector, will inform the home owner, in writing, of the conditions and the estimated repair date. Following the initial two year service policy, the installer, must make available, for purchase, a continued service policy comparable to the initial service policy. Our manufacturers will stock any and all replacement parts necessary to ensure that the HOOT Aerobic Treatment System will operate properly as long as you own your home. To service a HOOT System, a service representative must be certified on an annual basis by HOOT Aerobic Systems, Inc., or their qualified representatives.

TREATMENT SYSTEM INITIAL SERVICE POLICY

2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

Our Company,_____, will operate and maintain the Hoot Aerobic System located at_____, (legal description only)
Permit #_____, for the period of 2 years beginning_____and ending_____.

This contract will provide for all required inspections, testing and service of your HOOT Aerobic Treatment System. The policy will include the following:

1. _____ inspections a year/service calls (at least one every _____ months), for a total of _____ over the two-year period including inspection, adjustment and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting the control panel, air pumps, air filters, diffuser operation, and replacing or repairing any component not found to be functioning correctly.

2. An effluent quality inspection consisting of a visual check for color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.

3. If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified immediately in writing of the conditions and estimated date of correction.

4. The Homeowner is responsible for maintaining a chlorine residual of at least 1mg/L in the treatment system. This can be accomplished by using chlorine tablets designed for wastewater use, NOT SWIMMING POOL TABLETS. Upon visit, if the system needs chlorine tablets the service provider will add them and charge the customer. If the customer fails in their responsibility to add the chlorine tablets, they are in violation of law and appropriate action will be taken.
Initials of Installer_____ Initials of Homeowner_____

5. Any additional visits, inspections or sample collections required by specific Municipalities, Water/River Authorities, County Agencies the TNRCC or any other regulatory agency in your jurisdiction will be covered by this policy.

At the conclusion of the initial service policy, the Service Provider will make available, for purchase on an annual basis, a continuing service policy to cover labor for normal inspection, maintenance and repair. According to state law, all owners of aerobic systems must maintain a factory authorized service provider for the lifetime of the system.

With 48 hours of a request for service (weekends and holidays excluded), your system will be visited by the service provider listed below or their authorized agent. If there are any items which need correction and can not be immediately remedied, the service provider will inform the home owner, in writing, of the conditions and the estimated repair date.

The HOOT Homeowners Manual must be strictly followed or warranties are subject to invalidation. Pumping of sludge build-up, for reasons other than due to warrantied mechanical failure, are not covered by this policy and will result in additional charges. By signing this form, both Installer and Homeowner agree to the terms of this policy. By signing this form, both the Installer and the Homeowner agree that the Homeowner has received a copy of the Homeowners Manual and the Installer has made a reasonable effort to explain all pertinent information to the Homeowner.

HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	SERVICE PROVIDER
_____ Name	_____ Name of Service Company Representative
_____ Address	_____ Address
_____ City	_____ City
(____) _____ - _____ Phone	(____) _____ - _____ Phone
_____ Signature of Home Owner	_____ Signature of Service Provider and License #.

Homeowner Trouble Shooting

If both **AERATION PROBLEM** and **WATER LEVEL PROBLEM** occur, the photocell cannot tell the difference between daylight and darkness. This occurs when the computer "sees" that either day or night is greater than 32 hours. To correct this problem, redirect or turn off any overhead light that comes on a dusk, on at dawn.

If you have re-directed or turned off an overhead light, you will need to reset the controller to clear the alarm. To do this, you simply need to turn off the power to the system at your panel box for 10 seconds and then turn it back on. If the problem re-occurs approximately 30 hours later, you have a problem with your photocell and you will need to call your qualified Hoot Service Provider for assistance.

If you do not have an overhead light, then there is a problem with the photocell and you need to call your qualified Hoot Service Provider.

If **AERATION PROBLEM** occurs there has been a problem with your air delivery system. This is the most critical part of the treatment system and the problem must be corrected as quickly as possible. There are two problems that a homeowner can correct:

1. The air line from the blower to the control panel has come loose or been disconnected.

   Check first to see if the black line from the aerator is not pinched, and is properly installed into each end of the compression fittings. If this has been pulled loose, then turn off the power to the system at your panel box for 10 seconds and then turn it back on. If an aeration problem occurs again, then call for assistance.

If a **WATER LEVEL PROBLEM** and an audible alarm occurs, first determine if it is a problem also with an **AERATION PROBLEM** (See Above).

There are no homeowner repairs that can be made to the effluent delivery system. Please look directly at the panel and note wether the light is steady, slow or fast flashing. This will aid the installer in coming to the quickest resolution of your problem.

If **POWER FAILURE ALARM** occurs

1). Circuit Breaker to system - from house - is tripped.
2). Circuit Breaker at house panel box for remote breaker is tripped.

If **ADD CHLORINE** comes on

When the tablet level is between 1-2 tablets remaining, the **ADD CHLORINE** Indicator light will light and beep, and remain lit until chlorine has been added to the system. See directions on page 5 under **Chlorinator Maintainance.**

How The Night Pumper System Works

The system controls the pump based on a time clock principle. Each day at sun up, an internal clock begins a count down. 20 hours after sun up the system will pump out the tank. Upon initial start up of system, or after a power failure, the internal clock assumes daylight just occurred. The system starts the 20 hour clock till pump down. If night comes, and daylight then occurs before the 20 hours has passed, then the pump will automatically pump out at daybreak.

Water Over-Use

If at any time more than 360 gallons of water enter the system between pump cycles, (the maximum allowed for a 5 bedroom home) then the system must come on in a demand configuration mode. Thirty seconds prior to pumping, the system will turn on an audible alarm, with two short beeps in a row. After 30 seconds, the alarm will silence and turn the pump on for maximum of 4 minutes. If the level drops below the high probe, the pump will run an additional 4 minutes.

If this does not lower the level below the high probe the pump will jog 10 times and will pump for an additional 4 minutes. If this does not lower the water level below the high probe, a **WATER LEVEL PROBLEM** will occur with a **SYSTEM ALARM** red light and audible alarm. This might occur if a hot tub, Jacuzzi or other large volume of water is released into the system all at once. It should be noted that hot tub or Jacuzzi water should never be released into an aerobic system. This alarm is designed to tell the warn Home Owner that a large volume of water being released into the system all at once can disturb the process and should be metered in more slowly. If the system persistently comes on in a demand configuration, then it should be noted that the household either, uses too much water and is sized too small, is wasteful with water, or has running toilets, etc. It should also be noted that no Aerobic system can function correctly if too much water is run through the system. To determine if there is a plumbing leak check the clean-out located before the tank inlet by sprinkling a small amount of dry dirt or sand. If the dirt washes away, the width of the stream can indicate how much water is being wasted. A stream as little as 1/8" wide can indicate a leak of as great as 150 gallons a day.

Electrical System Warning

The HOOT Aerobic System features a custom designed control panel made of proprietary parts. Just like the rest of the treatment system, it may only be serviced by a certified HOOT Installer/Service Provider. Although an electrician may be employed by an installer to make the final hook-up, an electrician is not qualified to do service on our control panel unless under the direct supervision of a HOOT Certified Service provider.

LIMITED WARRANTY AND REGISTRATION

HOOT Aerobic Systems, Inc.®

2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

NO GENERAL WARRANTY: HOOT AEROBIC SYSTEMS, INC. DISCLAIMS ANY AND ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, AND **EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

HOOT LIMITED WARRANTY: HOOT Aerobic Systems, Inc. ("HOOT") warrants faulty workmanship or construction of the HOOT treatment system for three (3) years from the date of purchase, subject to the following condition: If HOOT determines that the fault in workmanship or construction of the HOOT treatment system is not the result of improper installation, improper maintenance, failure to service, natural disaster, an act of God (including flood, lightning or fire ants), or tampering by any means, then, at HOOT's discretion, HOOT has the right to provide a replacement for such faulty component. The faulty component will be replaced with a rebuilt or new component to the Service Provider for the first three (3) years from the date of purchase. This Warranty extends to the HOOT Service Provider ONLY. During the initial 2 year service policy, the component will be replaced at no charge to the Homeowner. During the third year, components will be provided only to a qualified HOOT Service Provider, at no charge, however any and all installation charges will be the responsibility of the homeowner.

SOLE REMEDY

HOOT's liability for any accident, injury, or damage to any person or property shall be limited to the purchase price of the HOOT Aerobic Treatment System. HOOT is not and shall not be liable for any incidental or consequential damages or injury, regardless of fault, to any person or property resulting from misdesign or mismanufacture of the HOOT Aerobic Treatment System, failure to warn, failure to label, or inadequate instructions in the manual. This clause is effective to the full extent allowed by law and shall be void where prohibited.

WARRANTY REGISTRATION

FOR THE ABOVE WARRANTY TO BE EFFECTIVE, THE HOMEOWNER AND ANY USER ATTEMPTING TO CLAIM ANY RIGHT UNDER THIS WARRANTY MUST COMPLETE THIS FORM AND RETURN A SIGNED COPY TO HOOT WITHIN THIRTY (30) DAYS FROM THE DATE OF INSTALLATION. The cost of pumping or cleaning of any component or compartment of the sewage treatment system, which becomes necessary for causes other than malfunction of the equipment, is the responsibility of the homeowner.

By signing this Service Policy, the Home Owner and the Service Provider agree to the terms of this policy. HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	**SERVICE PROVIDER**
_____	_____
Name	Name of Service Company Representative
_____	_____
Address	Address
_____	_____
City	City
( ) - _____	( ) - _____
Phone	Phone
_____	_____

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Signature of Home Owner Provider and License #.

Signature of Service

Service and Inspection Form

(This is an example only, please check State and Local Requirements)

This testing and reporting shall be completed, signed and dated after each inspection. One copy shall be retained by the maintenance company. The second copy is sent to the local permitting authority and the third copy is sent to the system owner along with an invoice for services by the maintenance company.

1. Actual Date of Visit: _____
2. System Inspection of:
   Owner: _____
   Address: _____
   City, St., Zip: _____

Inspected Items:	Operational	Inoperative	Not Applicable
Aerator.....	☐	☐	☐
Aeration Plumbing.....	☐	☐	☐
Air Filter.....	☐	☐	☐
Effluent Pump.....	☐	☐	☐
Chlorinator.....	☐	☐	☐
OK System Light.....	☐	☐	☐
Probe.....	☐	☐	☐
Sprinkler/Drip Backwash.....	☐	☐	☐
Photocell Test.....	☐	☐	☐
Battery.....	☐	☐	☐

Battery must be replaced once each year. Air Filter must be cleaned each service visit. Operation of effluent disposal system must be made each visit, including chlorine residual test, effluent pump operation and sprinkler operation/ drip backwash.

3. Repairs to system (list all components replaced):_____

4. Tests Required and Results:

Test	Required	Results	Test Method
BOD (Grab)	☐	_____	_____
TSS (Grab)	☐	_____	_____
Fecal Coliform	☐	_____	_____
Chlorine Residual	☐	_____	_____

5.Comments:_____
_____
_____

Signature of Inspector:_____Installer II or WW Lic # _____

For Additional Information, Please Contact:

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, LA 70607
(337) 474-2804 phone (337) 477-7904 fax

www.hootsystems.com

INSTALLATION MANUAL

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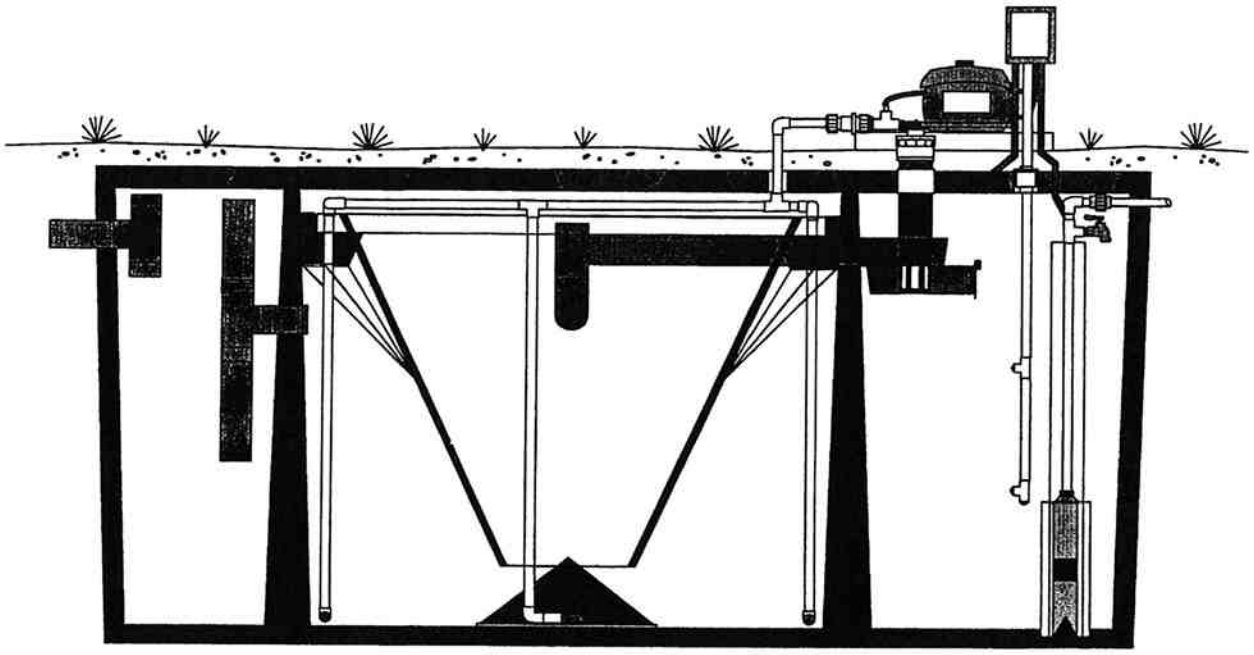
HOOT AEROBIC TREATMENT SYSTEMS

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

2001 Installers Manual

This Product has been tested in accordance with the criteria set forth in the ANSI/NSF Standard 40 and is hereby certified as a Class I Aerobic Wastewater Treatment Plant.



The HOOT Aerobic Treatment System Declaration of Warnings

WARNING! TO PREVENT MALFUNCTION OF YOUR SEWAGE SYSTEM, DO NOT DISCHARGE THE FOLLOWING MATERIALS INTO THE SYSTEM: Plastic Materials ! Cloth ! Cigarette Stubs ! Large quantities of acids or caustics, soaps or cleaning materials which have a high or low pH factor (Use low suds detergents) ! Throw-away Diapers ! Baby wipes ! Paper Towels ! Kleenex & some toilet tissues which do not decompose readily in water ! Rubber products ! Excess grease or fatty materials (Use garbage disposal sparingly) ! Oily materials, motor oils, grease, kerosene, gasoline, Paints, etc. ! Backwash water from water softeners (in accordance with TNRCC regulations) ! Any other materials which do not disintegrate readily in water ! SUMP PUMP DISCHARGE

WARNING! TO FUNCTION PROPERLY, THE HOOT SYSTEM MUST BE MAINTAINED BY A QUALIFIED PROFESSIONAL AT LEAST EVERY SIX (6) MONTHS FOR THE LIFE OF THE SYSTEM. FAILURE TO MAINTAIN THE HOOT SYSTEM VOIDS THE LIMITED WARRANTY AND MAY CAUSE SERIOUS BODILY INJURY OR ILLNESS TO PEOPLE AND PETS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM OR OTHER PROPERTY.

DANGER! ONLY A QUALIFIED PROFESSIONAL SHOULD ATTEMPT TO REPAIR OR FIX THE HOOT SYSTEM. ATTEMPTED REPAIR BY ANYONE OTHER THAN A QUALIFIED PROFESSIONAL MAY CAUSE SERIOUS BODILY INJURY OR DEATH TO THE HOMEOWNER OR OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT DISCONNECT THE POWER TO THE HOOT SYSTEM. DISCONNECTION OF THE POWER FROM THE SYSTEM MAY CAUSE SERIOUS ILLNESS OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IN CASE OF IMMINENT FLOOD, IMMEDIATELY TURN OFF THE ELECTRICAL POWER TO THE HOOT SYSTEM AT THE INDEPENDENT BREAKER LOCATED ON THE HOUSE. FAILURE TO TURN OFF THE ELECTRICAL POWER MAY CAUSE SERIOUS INJURY OR DEATH TO THE HOMEOWNER AND OTHER PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! IF THE UNIT FAILS TO FUNCTION PROPERLY, DO NOT USE THE BATHROOM FACILITIES UNTIL QUALIFIED PERSONNEL FIX THE PROBLEM. USE OF THE BATHROOM FACILITIES DURING A SYSTEM FAILURE MAY CAUSE SERIOUS INJURY, ILLNESS, OR DEATH TO PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

WARNING! DO NOT ALLOW CHILDREN TO PLAY ON OR AROUND THE AEROBIC TREATMENT SYSTEM, THE SPRINKLER SYSTEM, OR OTHER OVER-LAND DISCHARGE AREA. ALLOWING CHILDREN TO PLAY IN THESE AREAS MAY CAUSE SERIOUS BODILY INJURY, ILLNESS, OR DEATH TO THE CHILDREN AND OTHER PERSONS AND MAY CAUSE DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.

DANGER! DO NOT OPEN CONTROL PANEL WITHOUT ELECTRICITY DISCONTENTED AND LOCKED OUT ON THE SYSTEM. FAILURE TO DO SO COULD CAUSE SEVERE INJURY OR DEATH

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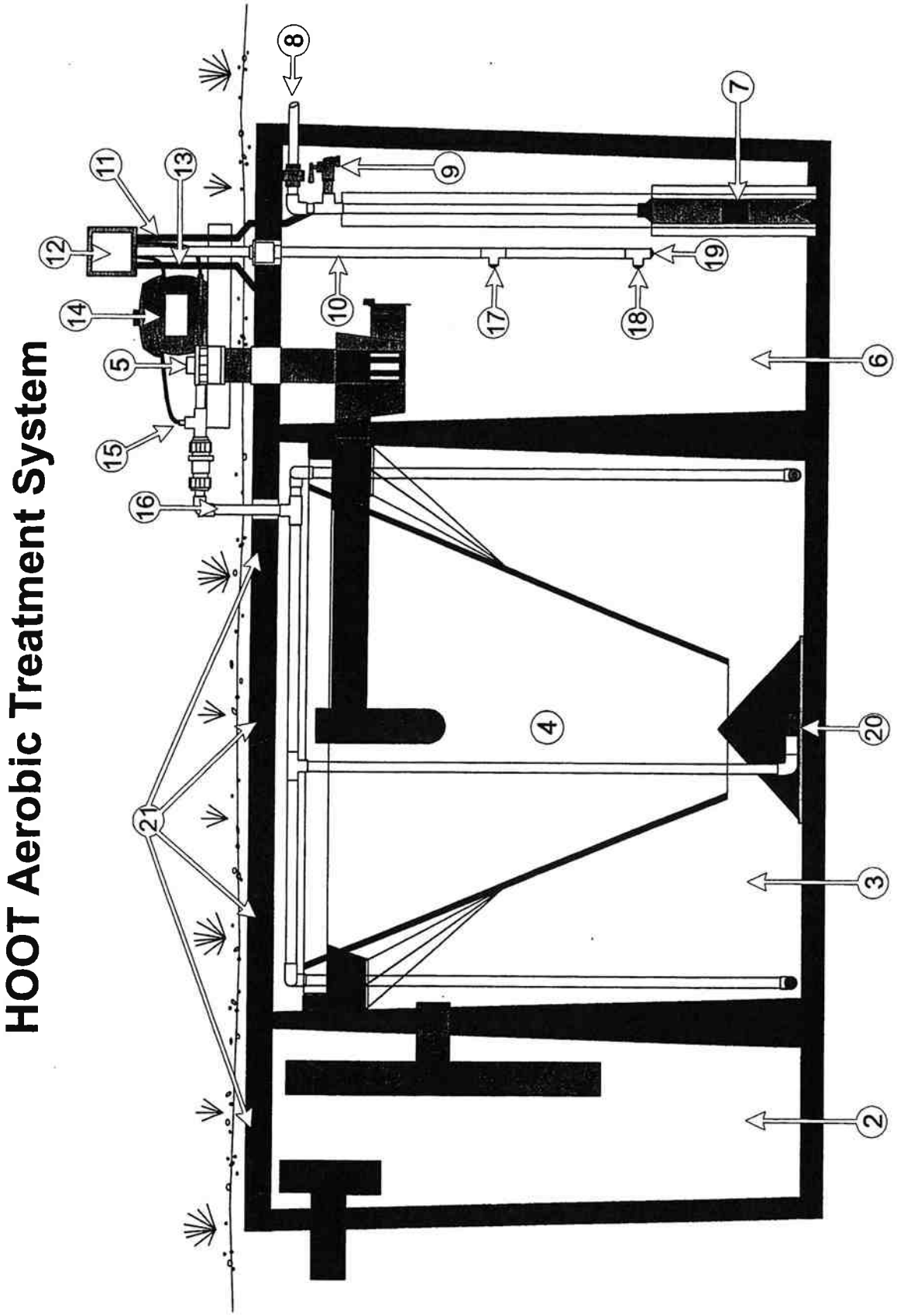
HOOT Aerobic Treatment System
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The HOOT Aerobic Treatment System Diagram

1. Inlet
2. Pretreatment Tank
3. Aeration Chamber
4. Clarifier
5. Chlorinator
6. Pump Tank
7. Hoot Blaster Pump
8. Pump line out
9. Control valve
10. Probe
11. Pump wire
12. System Controller
13. Power Line (20 amp)
14. Linear Air Pump
15. Air Manifold
16. Aeration line
17. High Water Probe
18. Low Water Probe
19. Probe Ground
20. Aeration Stone
21. 15" Covers

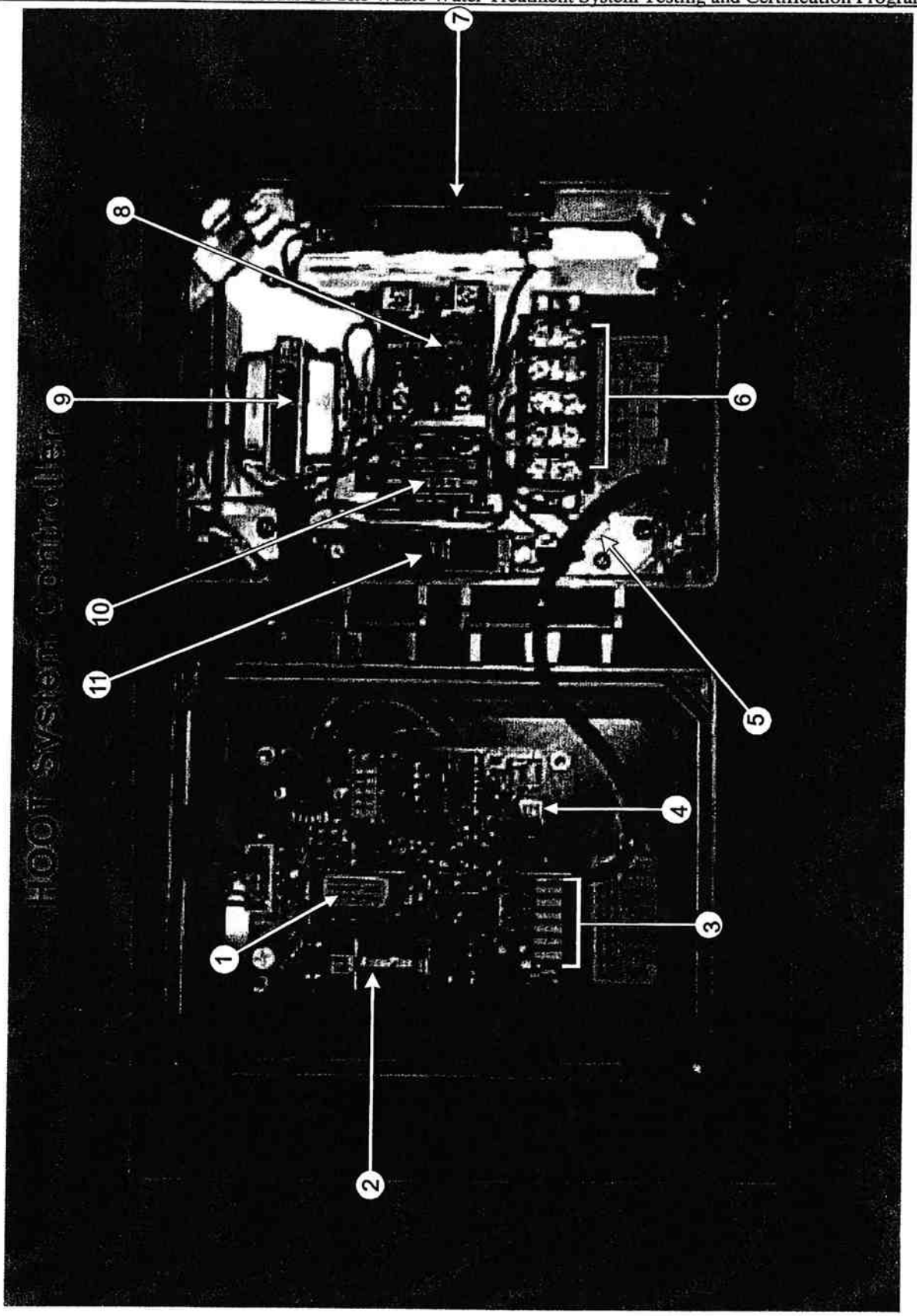
Tank Installation Instructions

1. See Tank dimensions section and dig hole approximately one foot larger than the tank all the way around - proper grade with smooth and level bottom.
2. Fill out Installation and Delivery Tracking Form. Driver will not leave tank at jobsite until this filled out.
3. Delivery driver will place tank in hole - and confirm it is level within 1 inch from center of tank to any corner.
4. Connect Schedule 40 inlet and Tee into one or more openings to the Pre-Treatment Tank, and Schedule 40 1" line out to sprinklers - back-fill with dirt and fill tank with water.
5. Bring required access ports to grade.
6. Follow the instructions for the System Controller Installation.
7. Hook up blower plumbing - including sensor line to the Aeration Tee.
8. Hook up water pump to sprinkler system. Make sure you have a minimum of 3 spray heads and that the orifices add up to a total of 12 Gallons Per Minute. If your plans call for only two heads, then place 2 back to back, with 180° radii to achieve a 360° with two spray heads, for a total of 3 spray heads.
9. Place cover over aerator - be sure not to pinch air line.
10. Power up system - it is ready to accept sewage.
11. Fill in Warranty Registration and Service Policy, and give to homeowner.

SPECIAL INSTRUCTIONS - PLEASE NOTE!

HOUSE WIRING MUST HAVE 30 AMP INDEPENDENT BREAKER AND MUST MEET NATIONAL - STATE - AND LOCAL REGULATIONS. INSTALLATION AND OPERATION MUST BE IN COMPLIANCE WITH STATE WATER REGULATIONS, COUNTY AND LOCAL PLUMBING AND ELECTRICAL CODES.

FAILURE TO COMPLY TO THE INSTRUCTIONS FOR THE INSTALLATION OF THE TANK AND THE SYSTEM CONTROLLER WILL VOID ANY AND ALL WARRANTIES PROVIDED BY HOOT AEROBIC SYSTEMS, INC., AND WILL PLACE THE BURDEN OF WARRANTY COVERAGE ON THE INSTALLER. FAILURE TO FOLLOW INSTALLATION INSTRUCTIONS PROPERLY MAY CAUSE SERIOUS INJURY, ILLNESS, OR DEATH TO PERSONS AND MAY CAUSE SERIOUS DAMAGE TO THE HOOT SYSTEM AND OTHER PROPERTY.


HOOT System Controller
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System Controller Installation

System Controller Diagram

1. Controller Chip
2. Nickel Metal Hydride 9 volt battery
3. Probe & CL hook-up
4. Dip Switches
5. Grounding Lug
6. Terminal Strip
7. 20 Amp Water Pump Breaker
8. 45 Amp Water Pump Relay
9. Transformer
10. Aeration Relay
11. 15 Amp Aeration Breaker

***A 30 Amp Service Box** - within sight of the unit, must be provided by the homeowner before the unit can be installed. Installer must have a qualified electrician bring a line out to the area where the unit is being installed for hook-up.

DETAILED INSTRUCTIONS

1. Unscrew the two screws securing the cover of the box.
2. Determine and cut the length of 1" PVC Conduit needed so that the box will be mounted taller than the blower housing.
3. Cut the conduit and glue it to the probe base on the Tank - feeding the probe wires through.
4. Mount the controller box to the top of the 1" conduit, feeding the probe wires through into the box.
5. Cut the probe wires so that there is approx. 12 inches of wire coming out of the box.
6. Strip back each of the wires, lift lever and insert wires according to the sticker under the board.
7. Feed the aerator cord through the compression connector, through the flex conduit and into the box. Then screw conduit into the connector on the box and glue conduit to compression adapter. Pull wire into the box, leaving approx. 1" of wire between the end of the conduit and the blower.
8. Connect the black wire to the + Blower screw on the terminal strip .
9. Bring the sprinkler pump wires and gray chlorinator sensor wires through flex conduit, screw flex conduit into the connector on the bottom of the box, then fill the stub on the tank, and each end of the flex conduit with Silicone II.**(Failure Silicone II flex pipe will void the warranty!)**
10. Connect one of the black pump wires + Pump screw on the terminal strip.
11. Strip back the gray wires and connect to the board next to the probe wires.
12. Make sure 30 amp circuit breaker,(power from house, supplied by owner) is turned off.
13. Bring the power wire through flex conduit, screw conduit into the connector on the box and fill each end of the flex conduit with Silicone II **(failure to Silicone II flex pipe will void the warranty!)**
14. Connect the hot wire (+) to space provided on the terminal strip.
15. Connect the neutral (-) from power line to the space provided on the terminal strip.
16. Connect the 2nd sprinkler pump wire and aerator to the neutrals space on the terminal strip.
17. Connect the ground from the power line, sprinkler pump and aerator to the grounding lug.
18. Turn both breakers in control box off, then on again to reset.
19. Hook up black air line to the brass compression fitting on the aeration tee.
20. Turn on 30 amp breaker at the house
21. Install the 9 volt battery into the connector on the board.
22. Re-install cover with the two screws, do not use screw gun or box damage may occur.
23. Turn Control box so that it faces the house or driveway.

HOOT Trouble Shooting Section

Problems at Start Up or After Power Loss

If **AERATION PROBLEM** occurs on Power up - Check Aerobic Chamber. The center tank should be full to the point where the pre-treatment tank is full and water flows into the pump tank. If it is not filled within 1 foot of the top in the Aeration tank, a **AERATION PROBLEM** will occur on start up. This occurs because there is not enough back pressure being developed, fill the tank and restart. If there is still a problem, check air line for leaks, black line and compression fittings, check valve, and inside tank for a lose or broken diffuser line or blown out/broken stone.

If **SYSTEM ALARM** red light on panel comes on only, no audible alarm occurs, and water pump begins to pump, there is too much water in the pump tank. This feature will pump the tank down for a maximum of one (1) hour. If pump does not come on, check breakers on bottom of panel, reset if necessary. If it has tripped, confirm it is the 20 amp breaker. If it is not, check the wiring inside the box and confirm we have not made an error during manufacturing. If it is the 20 amp breaker, the check valve on the top of the water pump is likely stuck. Remove the plumbing from the pump, turn the pump upside down and dislodge it. Be careful when you re-assemble the plumbing. If the water level is high only in the pump tank, the pump will be able to pump it down in the first hour of operation. If the entire system has been overfilled, you will get an alarm after one (1) hour of pumping. To pump the system down the rest of the way, simply cycle the power off, wait 5 seconds, and power back up. If there is still water above the high probe then the water pump will continue to pump. If the water level is between the low and the high probes, the system will go to normal operation.

If **SYSTEM ALARM** red light on panel comes on only, no audible alarm occurs, and nothing on the system functions, check to make sure that the computer chip is in the socket. If it is, make sure it is in the right direction, with the notch lined up.

If you get a fast flashing **WATER LEVEL PROBLEM** light, the probe has been incorrectly hooked up. Confirm that all connections to the board are good and to the proper locations according to the diagram on page 25 of this manual. If this not the problem, try a new controller board and chip, then probe.

If a FAST FLASHING **AERATION PROBLEM** occurs on Power up check for diffuser operation. If no Air is coming out, then the check valve has likely been installed backwards. Check that the arrow flows away from the air pump to the tank.

2000 System Troubleshooting Chart

RED **SYSTEM ALARM** YELLOW **AERATION PROBLEM** YELLOW **WATER LEVEL PROBLEM**	This is a Photocell Problem - First check for overhead light - if not- see (page 30)
RED **SYSTEM ALARM** YELLOW **AERATION PROBLEM**	Yellow Light is: **Steady** - Is Aeration Tank Full? Check for Air leaks, then see Aeration Problem (page 19) **Fast Flashing** - Air pump is dead headed - reverse check valve or stones completely clogged. (page 11)
RED **SYSTEM ALARM** YELLOW **WATER LEVEL PROBLEM**	Yellow Light is: **Steady** - Pump unable to lower below high probe **Slow Flashing** - Pump ran greater than 1 hour **Fast Flashing** - Wiring problem, bad probe or board. (pages19 &20)
RED **SYSTEM ALARM**	Will occur on start-up or after power failure if water is above high probe (page 20)
GREEN **SYSTEM OK** YELLOW **WATER LEVEL PROBLEM**	System has received greater than its daily rated capacity of water, will clear yellow light at pump out. (Pages 21)
GREEN **SYSTEM OK** YELLOW **AERATION PROBLEM**	Aeration pressure is too high. Check for excessive solids build up or clogged stones. (pages 10 &11)
RED FLASHING **SYSTEM ALARM**	Power is off to system or bad transformer. Pg. 20
GREEN **SYSTEM OK** RED FLASHING **SYSTEM ALARM**	Battery not installed/not yet charged or battery cannot hold charge and needs replacement.

If both **AERATION PROBLEM** and **WATER LEVEL PROBLEM** occur, the system cannot tell the difference between daylight and darkness. If either day, or night is greater than 32 hours, both the Aeration and Water Level lights, along with System Alarm red light and audible alarm. Air pump will be running.

1. Power down the controller. Place a piece of black electrical tape over the photocell. Make sure the tape is light tight and completely covers the photocell window. It only takes a small amount of light to give a false indication.
2. Turn the power on and observe green light. If you get a red light, pump system down until the water level is between low and high probe and reset system. Make certain there is water a least 3" over low probe.
3. Wait 3 minutes.
4. Remove the tape and wait about 2 minutes.5. The pump should start and will empty the tank to the low probe.

If the above works, you have an overhead light in the area, re-direct the light or controller.

If **AERATION PROBLEM** occurs go through this list in order, until the problem has been discovered and corrected. This is the quickest and most efficient way of solving and correcting and aeration problem.

Aeration Delivery System Diagnosis

1). Check to see that black air line is not pinched, and is properly installed into the end of the compression fitting. Make certain there is no debris in the compression fitting.
2). Confirm that check valve has been installed with arrow going away from aerator and with the flat part on top, check each end for leaks.
3). Listen for leaks at each fitting on top of tank.
4). Remove covers over each aerator stone, check for a loose or broken connections on top of hopper.
5). Restart system and visually check that each stone is delivering approximately an equal amount of air. If only one section is functioning, this indicates a broken or missing diffuser.

Electrical System Diagnosis

7). Check if 15 amp circuit breaker in controller is tripped
8). Check for loose connections inside control box

If a **WATER LEVEL PROBLEM** and audible alarm occurs, first determine if it is a problem with a **AERATION PROBLEM** (See Above) or STEADY, FAST or SLOW FLASHING, and find section below to trouble shoot and fix. Go through this list in order, until problem has been discovered and corrected. This is the quickest and most efficient way of solving and correcting and problem.

If a STEADY **WATER LEVEL PROBLEM** and audible alarm occurs the pump has been unable to lower the level below the high probe.

1). Check to see if 20 Amp Circuit breaker for water pump is tripped, reposition and restart.
2). Check valve on top of water pump stuck, remove pipe and check for proper movement and operation.
3). Sprinkler head pressure relief valve open too wide.
4). One or more sprinkler heads clogged (every system must have a minimum of 12 GPM of spray heads - check orifice size!)
5). Sprinkler pump is clogged.

If SLOW FLASHING **WATER LEVEL PROBLEM** and audible alarm occurs

This indicates that the pump has run greater than 1 hour and it has still not emptied the tank. This can occur if power has been off to the system for any extended period of time and the system has continued to be used or if one of the problems is present with the spray system. This problem may occur months into system operation due to a great number of factors.

1). Only 2 or less spray heads on the system. If there are only two called for in the system design, then place two heads back to back, each having a 180° radius to complete, together one, 360° radius.

2). Spray head orifices do not add up to 12 Gallons Per Minute. Install the right number and rating of orifices to equal a total of 12 GPM.

3). Sampling port in tank has been opened, or left open too much, not allowing for proper pump down of tank.

4). One or more spray heads is not working, or has a very limited amount of water movement. Clean out screen on head, or replace if necessary.

5). If Problem occurs only after a rain, then suspect infiltration into system. Also make certain gutters are not hooked up to Aerobic System

If FAST FLASHING **WATER LEVEL PROBLEM** and audible alarm occurs

1). Probe wires hooked up wrong or loose, confirm proper placement.
2). Problem with controller board.
3). Problem with probe.

If **SYSTEM ALARM** red light on panel comes on only, no audible alarm occurs, and nothing on the system functions, check to make sure that the computer chip is in the socket. If it is, make sure it is in the right direction, with the notch lined up.

If Flashing **SYSTEM ALARM** occurs with Green **SYSTEM OK** light

1) Battery not installed, Charged or is dead

If Flashing **SYSTEM ALARM** occurs only:

1). Circuit to system - from house - is tripped.
2). Circuit at house panel box for remote breaker is tripped.
3). Improper connection in controller box - see installation instructions.
4). Power line to unit is cut or broken, check for voltage with meter.
5). If power is present, then check for bad connection to transformer, from transformer to board, and finally replace transformer if necessary. If transformer has blown, this usually indicates that the system has been hooked up to 220 volts or that the system has suffered a lightening strike. Either way, expect that other damage have occurred.

Installer Self Test - All systems

This is a simple test designed to prevent you from needing to return because of a faulty installation As you know, you install the finest product available, to ensure you get off to a good start with the system owner, go through the following test. Failure to follow these procedures will normally result in a SYSTEM ALARM within the first 12 hours of operation.

1. Confirm that the water level in the Aeration (Center) Tank is less than 12" from the lid of the tank.
2. Confirm that the water level in the pump tank is between the low probe and high probe and is at least 12 inches above the sprinkler pump.

   If water level is above the high probe, turn on power - you will get a red light and the sprinkler pump will turn on. There will be no audible alarm. It will run for up to 1 hour to lower the water level, if it cannot in this amount of time you will get an alarm, reset system and pump down again. When level is between low and high probe, power down system for 5 seconds and restart. You should get a green light. Do Not Leave until all instructions below have been carried out.
3. Power up - turn independent 30 amp breaker on, you will hear a beep and all the lights will come on for 2 seconds, then the SYSTEM OK green light will flash.
4. The SYSTEM OK light flashes for 15 seconds, if there is enough air, the system will continue to operate, if not an AERATION PROBLEM will occur.
5. Check diffuser operation over each of the openings on the aeration chamber. If air is only coming out of one opening, then there is a missing or damaged stone. If no air is coming out, confirm check valve is in the right direction, then listen for air inside tank.
6. If enough air is being supplied, and there are no leaks, then you should continue to have operation. If not, and alarm will sound, check trouble shooting section for help.
7. Check sprinkler pump operation and spray pattern with any of the methods listed on page 10.
8. To stop sprinkler pump operation, power down, (turn off breaker, wait 5 seconds) confirm water is between low and high probes and restart system.
9. The SYSTEM OK light should come on and stay steady after 15 seconds. If not, see start-up troubleshooting on next page.

To Inspect Water Pump Operation

To prevent damage to the pump, the computer will not allow you to start the pump unless there is water over the low probe. To make the pump turn on to observe spray pattern, empty the tank or for inspection visits and sampling, you have four ways to turn it on:

1. With system running fill tank until water level reaches the high probe. This will turn on the pump for 4 minutes if it is a night pumper, or for one complete cycle if it is a day pumper.
2. Hold system alarm switch in the up position when you power up the system at the breaker. This will empty the tank to the level of the low water probe.
3. Unscrew the compression nut (where the black hose attaches) on the aeration tee. This will create an aeration failure, and the water pump will automatically lower the water level to the low water probe level.
4. Power up the controller and observe green light. Confirm that there is water over the low water probe, but not above the high probe. Wait 3 minutes. Place a piece of black electrical tape over the photocell and wait an additional 3 minutes. Remove the tape. Approximately 2 minutes later the pump will activate and confirm that the photocell is working correctly.

To Create A High Water Alarm for Inspection

To create a high water alarm for inspection purposes is a simple operation. Disconnect the Schedule 80 gray connection inside the tank which connects the pump to the application method chosen. Be sure to not loose the O-ring, it would be safe to remove it at this time. Rotate pump so that outlet faces a side wall (to minimize spray out of the system) Make sure system is on and you have a Green light SYSTEM OK. Next, fill the tank until the water level reaches the high water probe and continue filling tank during the test. This will activate the night pumper warning circuit if it is a night system for 30 seconds, then turn on the pump. If the system is a day or demand pumping configuration, then it will immediately turn on the pump. After four (4) minutes of operation, the system will realize that the water level has not dropped, it will attempt to clear what it thinks is a clogged pump. It will do this by electronically "jogging" it, turning it on for one (1) second, off for two (2) seconds ten (10) times in an attempt to loosen any debris that may be caught in the pump. The pump will then continue to pump down for an additional four (4) minutes. Since the water level has not lowered below the high water probe, a SYSTEM ALARM will occur, HIGH WATER PROBLEM. Silence alarm, reconnect pump (using O-Ring) and power down system. Wait 5 seconds and power up again.

If this does not produce an alarm, (common to day pumpers) then leave everything as it is above (pump scd. 80 disconnected) and disconnect the blue probe wire. Observe a green light on the front of the control panel. Fill the tank to two inches above the high probe and while you still have a green light on, reconnect the blue probe wire, resume test as is above. This is necessary because on a day pumping system the pump kicks on immediately and may break contact with the high probe, running the pump for one hour before giving an alarm.

Probe Operation and Maintenance

The PVC probe is activated by the Stainless Steel bolts which come in contact with the water as the tank level rises. They require little maintenance, contain no moving parts, so there is nothing to wear out or break. An a/c current runs through the bolts (which is equivalent to a watch battery) to prevent corrosion. A simple brushing of the bolt heads during the regular scheduled service is all the maintenance necessary for proper operation.

When water touches the high water probe, it turns on the HOOT Blaster effluent pump. The Day Pumping system will pump for up to four (4) minutes and look at the high water probe again. Under normal operation it will pump below the surface of the bolt and then continue to pump until the low water probe is reached.

If after four (4) minutes of pumping, the water level has not dropped below the surface of the high water probe, the system will attempt to clear the clogged pump. It will do this by electronically "jogging" it, turning it on for one (1) second, off for two (2) seconds ten (10) times in an attempt to loosen any debris that may be caught in the pump. The pump will then continue to pump down for an additional four (4) minutes. If the water level has not lowered below the high water probe, a SYSTEM ALARM will occur, HIGH WATER PROBLEM. To assist you with fixing the problem, please see the troubleshooting section.

On a Night Pumping system each time water touches the high probe, it will turn on the pump for four (4) minutes once it clears the high water probe. This cycle will repeat until 20 hours after sun up when the system will pump out the entire pump tank.

LIMITED WARRANTY AND REGISTRATION

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

NO GENERAL WARRANTY: HOOT AEROBIC SYSTEMS, INC. DISCLAIMS ANY AND ALL WARRANTIES, EITHER EXPRESS OR IMPLIED, AND **EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

HOOT LIMITED WARRANTY: HOOT Aerobic Systems, Inc. ("HOOT") warrants faulty workmanship or construction of the HOOT treatment system for three (3) years from the date of purchase, subject to the following condition: If HOOT determines that the fault in workmanship or construction of the HOOT treatment system is not the result of improper installation, improper maintenance, failure to service, natural disaster, an act of God (including flood, lightning or fire ants), or tampering by any means, then, at HOOT's discretion, HOOT has the right to provide a replacement for such faulty component. The faulty component will be replaced with a rebuilt or new component to the Service Provider for the first three (3) years from the date of purchase. This Warranty extends to the HOOT Service Provider ONLY. During the initial 2 year service policy, the component will be replaced at no charge. During the third year, components will be provided only to a qualified HOOT Service Provider at no charge, however any and all installation charges will be the responsibility of the homeowner. All warranties are null and void if the system is not maintained under continual service contract.

SOLE REMEDY

HOOT's liability for any accident, injury, or damage to any person or property shall be limited to the purchase price of the HOOT Aerobic Treatment System. HOOT is not and shall not be liable for any incidental or consequential damages or injury, regardless of fault, to any person or property resulting from misdesign or mismanufacture of the HOOT Aerobic Treatment System, failure to warn, failure to label, or inadequate instructions in the manual. This clause is effective to the full extent allowed by law and shall be void where prohibited.

WARRANTY REGISTRATION

FOR THE ABOVE WARRANTY TO BE EFFECTIVE, THE HOMEOWNER AND ANY USER ATTEMPTING TO CLAIM ANY RIGHT UNDER THIS WARRANTY MUST COMPLETE THIS FORM AND RETURN A SIGNED COPY TO HOOT WITHIN THIRTY (30) DAYS FROM THE DATE OF INSTALLATION. The cost of pumping or cleaning of any component or compartment of the sewage treatment system, which becomes necessary for causes other than malfunction of the equipment, is the responsibility of the homeowner.

By signing this Service Policy, the Home Owner and the Service Provider agree to the terms of this policy. HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	WARRANTY SERVICE PROVIDER
_____	_____
Name	Name of Service Company Representative
_____	_____
Address	Address
_____	_____
City	City
( ) - _____	( ) - _____
Phone	Phone
_____	_____
Signature of Home Owner	Signature of Service Provider and License #.

White Copy - Home Owner Yellow Copy - Installer Pink Copy - HOOT

TREATMENT SYSTEM INITIAL SERVICE POLICY

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, Louisiana 70607
(337) 474-2804 phone (337) 477-7904 fax

Our Company,_____, will operate and maintain the Hoot Aerobic System located at_____, (legal description only)
Permit #_____, for the period of 2 years beginning_____and ending_____.

This contract will provide for all required inspections, testing and service of your HOOT Aerobic Treatment System. The policy will include the following:

1. _____ inspections a year/service calls (at least one every _____ months), for a total of _____ over the two-year period including inspection, adjustment and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting the control panel, air pumps, air filters, diffuser operation, and replacing or repairing any component not found to be functioning correctly.
2. An effluent quality inspection consisting of a visual check for color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.
3. If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified immediately in writing of the conditions and estimated date of correction.
4. The Homeowner is responsible for maintaining a chlorine residual of at least 1mg/L in the treatment system. This can be accomplished by using chlorine tablets designed for wastewater use, NOT SWIMMING POOL TABLETS. Upon visit, if the system needs chlorine tablets the service provider will add them and charge the customer. If the customer fails in their responsibility to add the chlorine tablets, they are in violation of law and appropriate action will be taken.
   Initials of Installer_____ Initials of Homeowner_____
5. Any additional visits, inspections or sample collections required by specific Municipalities, Water/River Authorities, County Agencies the TNRCC or any other regulatory agency in your jurisdiction will be covered by this policy.

At the conclusion of the initial service policy, the Service Provider will make available, for purchase on an annual basis, a continuing service policy to cover labor for normal inspection, maintenance and repair. According to state law, all owners of aerobic systems must maintain a factory authorized service provider for the lifetime of the system.

With 48 hours of a request for service (weekends and holidays excluded), your system will be visited by the service provider listed below or their authorized agent. If there are any items which need correction and can not be immediately remedied, the service provider will inform the home owner, in writing, of the conditions and the estimated repair date.

The HOOT Homeowners Manual must be strictly followed or warranties are subject to invalidation. Pumping of sludge build-up, for reasons other than due to warrantied mechanical failure, are not covered by this policy and will result in additional charges. By signing this form, both Installer and Homeowner agree to the terms of this policy. By signing this form, both the Installer and the Homeowner agree that the Homeowner has received a copy of the Homeowners Manual and the Installer has made a reasonable effort to explain all pertinent information to the Homeowner.

HOOT is not responsible for service, it is the SERVICE PROVIDER indicated below.

HOME OWNER	**SERVICE PROVIDER**
_____ Name	_____ Name of Service Company Representative
_____ Address	_____ Address
_____ City	_____ City
(____) _____ - _____ Phone	(____) _____ - _____ Phone
_____ Signature of Home Owner	_____ Signature of Service Provider and License #.

THIS BOX MUST BE COMPLETED BY THE SERVICE PROVIDER

HOOT Model #_____ Blower/Panel Serial # _____ HOOT Mold # _____ - _____ - _____ - _____

White Copy - Home Owner Yellow Copy - Installer Pink Copy - HOOT Goldenrod Copy - Regulatory Agency

Service and Inspection Form

(This is an example only, please check State and Local Requirements)

This testing and reporting shall be completed, signed and dated after each inspection. One copy shall be retained by the maintenance company. The second copy is sent to the local permitting authority and the third copy is sent to the system owner along with an invoice for services by the maintenance company.

1. Actual Date of Visit: _____
2. System Inspection of
   Owner: _____
   Address: _____
   City, St., Zip: _____

Inspected Items:	Operational	Inoperative	Not Applicable
Aerator	☐	☐	☐
Aeration Plumbing	☐	☐	☐
Air Filter	☐	☐	☐
Effluent Pump	☐	☐	☐
Chlorinator	☐	☐	☐
OK System Light	☐	☐	☐
Probe	☐	☐	☐
Sprinkler Operation	☐	☐	☐
Photocell Test	☐	☐	☐
Battery	☐	☐	☐

Battery must be replaced once each year. Air Filter must be cleaned each service visit. Operation of effluent disposal system must be made each visit, including chlorine residual test, effluent pump operation and sprinkler operation.

3. Repairs to system (list all components replaced): _____

4. Tests Required and Results:

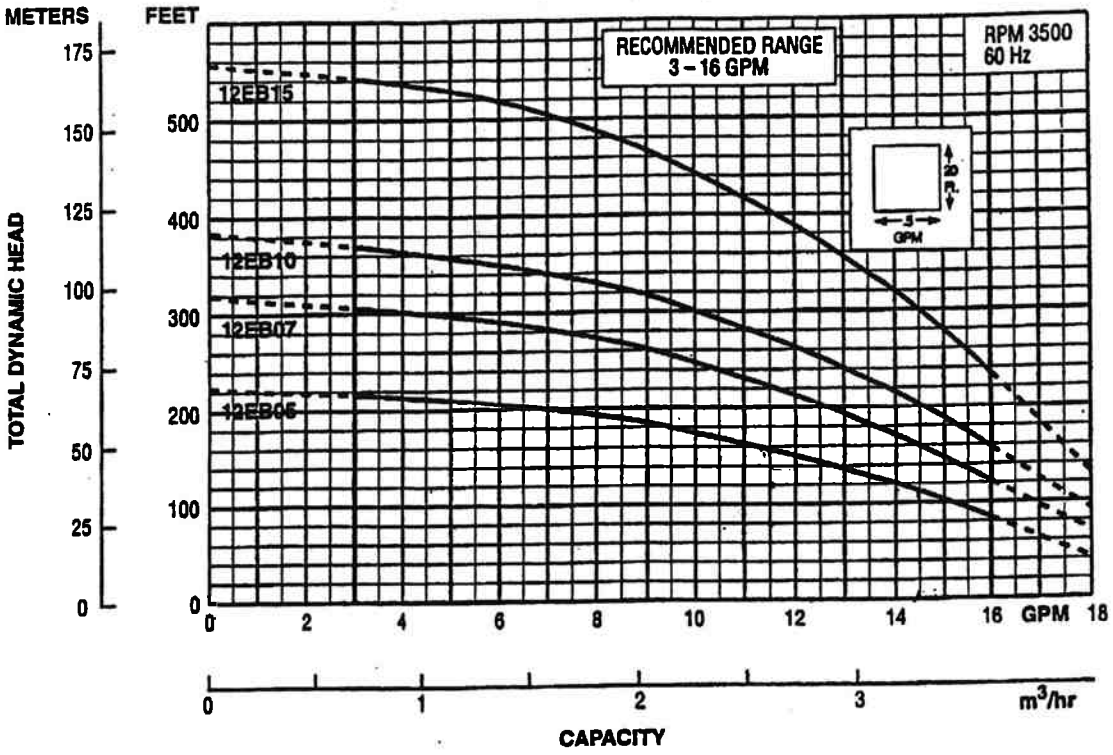
Test	Required	Results	Test Method
BOD (Grab)	☐	_____	_____
TSS (Grab)	☐	_____	_____
Fecal Coliform	☐	_____	_____
Chlorine Residual	☐	_____	_____

5. Comments: _____

Signature of Inspector: _____ Installer II or WW Lic # _____

Model 12EB

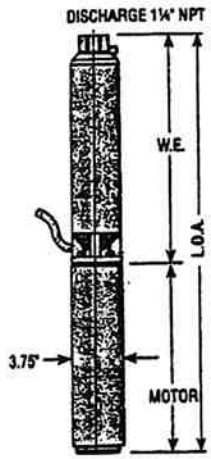
FILTERED EFFLUENT BLASTER.



DIMENSIONS AND WEIGHTS

Order Number	HP	Phase	Stages	Length (inches)			Weight (lbs.)		
				W.E.①	Motor	L.O.A.②	W.E.	Motor	Total
12EB0522, 12EB0521	½	1	7	11.0	9.5	20.5	4	18	22

① W.E. = water end or pump without motor.
② L.O.A. = length of assembly – complete pump – water end and motor.



HOOT BLASTER® Filtered Effluent Pump

SPECIFICATIONS

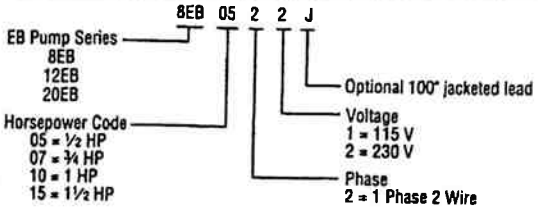
Model	Flow Range GPM	Horsepower Range	Best Eff. GPM	Discharge Connection	Maximum Solids Size	Rotation①
12EB	3 – 16	½ – 1½	10	1¼	⅛" dia.	CCW
20EB	6 – 28	½ – 1½	18	1¼	⅛" dia.	CCW

① Rotation is counterclockwise when observed from pump discharge end.

"EB" SERIES MATERIALS OF CONSTRUCTION

Part Name	Material
Discharge Head	Glass Filled Ultrathane
Check Valve Poppet	Ultrathane
Check Valve O-ring	E P Rubber
Bearing Spider – Upper	Glass Filled Polycarbonate
Bearing	Urethane
Klipring	AISI 301 SS
Diffuser	Glass Filled Polycarbonate
Impeller	
Bowl	AISI 304 SS
Shim	AISI 304 SS
Spacer	AISI 304 SS, Powder Metal
Inlet Strainer	Glass Filled Ultrathane
Motor Adapter	Glass Filled Ultrathane
Casing	AISI 304 SS
Shaft	
Coupling	AISI 304 SS, Powder Metal

ORDER NUMBER CODE



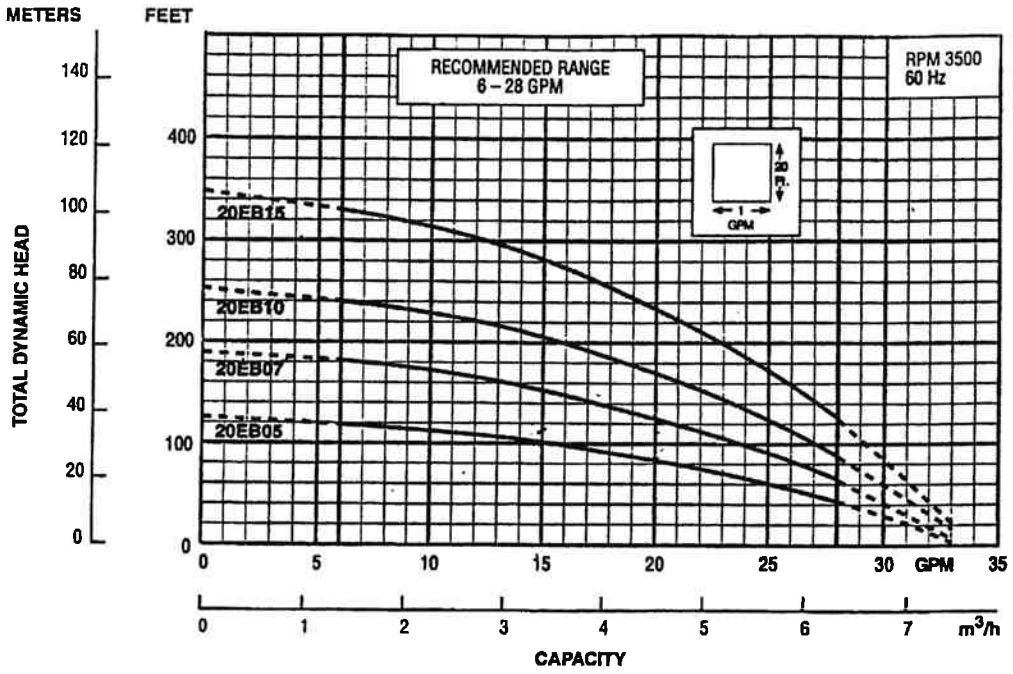
FEATURES

- Designed for pumping filtered effluent from processed septic systems only.
- **Field Serviceable:** Pump can be rebuilt in the field to like new condition with common tools and readily available spare parts. **NOTE: The Model EB has left hand casing threads.**
- **Powered for Continuous Operation:** All ratings are within the working limits of the motor as recommended by the motor manufacturer. Pump can be operated continuously without damage to the motor.
- **Metal Parts are Stainless Steel:** AISI types 301 and 304 are corrosion resistant.
- **Non-Metallic Parts are Effluent Compliant:** Impellers, diffusers and bearing spiders constructed of glass filled polycarbonate, an engineered composite. This material is corrosion resistant.
- **Discharge Head:** State of the art engineered composite material for superior strength and corrosion resistance. Loop for safety line molded into head.
- **Motor Adapter:** State of the art engineered composite material with high rigidity to provide accurate alignment of liquid end to motor. Generous space for removal of motor mounting nuts with regular open-end wrench.
- **Bowls:** Stainless steel for strength and abrasive resistance.
- 100" 3 wire motor lead standard.
- Consult factory for recommendations involving long run cycles followed by short off cycles to assure proper motor cooling flows.
- **Check Valve:** Built-in check valve assembly on all models.
- Warranted for one year against failure due to workmanship and materials. **Solids plugged pumps are not covered. Pumps used for liquids other than filtered effluent are not covered.**
- **Stainless Steel Casing:** Polished stainless steel is attractive and durable in the most corrosive effluent.
- **Hex Shaft Design:** Six sided shafts for positive impeller drive.
- **Inlet Strainer:** Molded suction strainer built into motor adapter.
- **Urethane Upper Bearings:** Fluted design for free passage of abrasives.
- **Franklin Electric Motor:**
  - Corrosion resistant stainless steel construction.
  - Built-in surge arrestor is provided on single phase motors.
  - Stainless steel splined shaft.
  - Hermetically sealed windings.
  - Replaceable motor lead assembly.
  - UL 778 and CSA recognized.
  - NEMA mounting dimensions.
- Optional 100' jacketed power cord available.
- **Agency Listings:** All complete pump/motor assemblies are UL778 and CSA listed. All Franklin Electric Motors are UL778 recognized.
- All models have ⅛" diameter bypass in discharge head to ensure venting on start up.

Underwriters Laboratories
File no. E174426
Canadian Standards Association
File no. 38549

–Model 20EB

FILTERED EFFLUENT BLASTER.



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① W.E. = water end or pump without motor.
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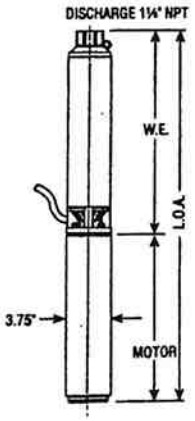

Printed on recycled paper.

Specifications are subject to change without notice.

Effective April, 1996
Printed in the U.S.A.
BBLASTER

For Additional Information, Please Contact:

HOOT Aerobic Systems, Inc.
2885 Highway 14 East Lake Charles, LA 70607
(337) 474-2804 phone (337) 477-7904 fax

www.hootsystems.com

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